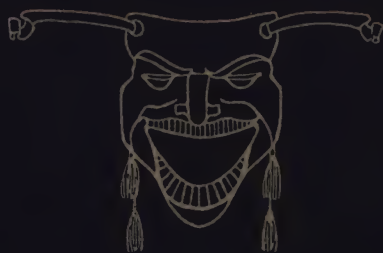


A
CATALOGUE
OF THEATRICAL
LIGHTING
EQUIPMENT
and EFFECTS



DISPLAY STAGE LIGHTING Co., INC
334 WEST 44TH ST., NEW YORK CITY

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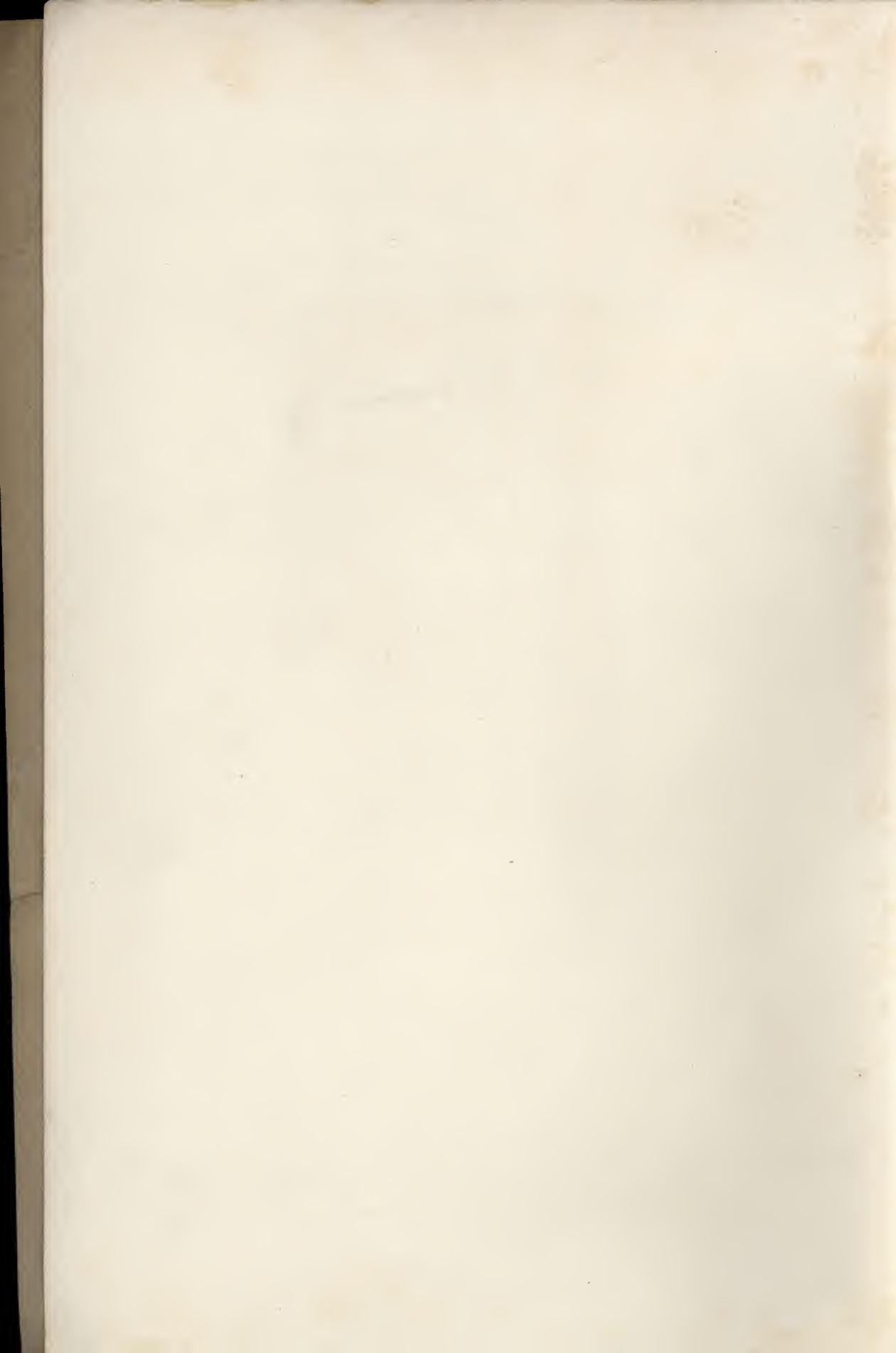
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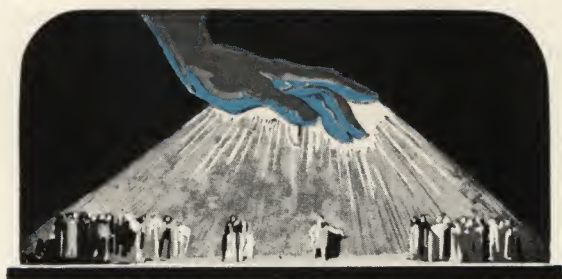
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A LIGHT FOR EVERY PURPOSE®



THEATRICAL LIGHTING AND EFFECTS

Complete electric lighting equipment for theatrical productions, pageants, expositions; architectural and show window lighting. Standard units or specially designed apparatus for individual problems. Theatrical lighting effects, apparatus and supplies. Spectacular and electro-mechanical effects.

C A T A L O G U E B

DISPLAY STAGE LIGHTING CO., INC.

334-340 WEST 44TH STREET

NEW YORK

Cable Address—"OCSID, NEW YORK"



PIONEERS OF PROGRESS



NLESS the world is to stand still, there must be men who are continually searching out the new thing, the better way of doing the familiar task—PIONEERS OF PROGRESS who blaze new trails. Especially is this true in the theatre, where the old and hackneyed must always be avoided, where success depends on originality and innovation.

The theatre itself is as old as the dimmest page of history, but scientific lighting of the theatre is in its infancy, dating only from the invention of the arc and the incandescent lamp, because it was only with these inventions that it became possible easily and accurately to control light. With the development of nitrogen spot, flood and border lights came a new era when the stage approached a satisfactory imitation of nature which surrounded the actor with an atmosphere of realism that made his scenes live.

This advance was a matter of comparatively few years, well within the memory of most of us; in fact, so few are the years that only today are we emerging from the crude elemental ways of doing things which yesterday were "fine" but today are not even "good enough."

The New Theatre

Not only is the development of lighting equipment working changes in production methods, but the Art of the Theatre is undergoing a tremendous revolution. The so-called "New Theatre" demands recognition, and the Display Stage Lighting Company, Inc., as pioneers in this movement, have responded to the ever present call for new improvements to meet old needs in new and more effectual ways, and to invent novel and more useful devices.

Eliminating where possible, making one piece of lighting apparatus take the place of many, making each item more practical, combining flexibility, durability, simplicity, compactness, and appearance, we are consistently refusing to be satisfied until each article has reached its highest state of development.

It is with considerable pride that the Display Stage Lighting Company, Inc. call attention to their brilliant achievements in lighting and in solving the lighting problems of our foremost producers, thereby establishing themselves as the outstanding authority on lighting in the theatre.



Originality

Our standard equipment, as shown in the pages of this catalog, has been improved and perfected to make each unit as simple and compact as practicable, to give the greatest degree of light intensity and quality, and to give each unit the utmost flexibility of use that it may lend itself readily to a variety of effects.

You will notice repeatedly the phrases "invented and patented by," "newly developed," "specially constructed," etc., which mean that the Display Stage Lighting Co., Inc. equipment has improvements and advantages which are exclusively its own. There are also items, as for instance the New Baby Hercules Combination Spot and Flood Light, the New Baby Hercules Combination Spot and Flood Light Border, Motor Operated Effects and Color Wheels, Motor Operated Dimmers, Scientifically Designed Aluminide Reflectors for All Purposes, and the Display Portable Stage Rigging, which are entirely new to the theatre, and fill long felt needs.

It is the constant aim of the Display Stage Lighting Co., Inc. to keep in the forefront by developing improvements upon existing models as well as by the invention of apparatus for special purposes and effects.

Safety

The element of safety is always a first consideration in the Display Stage Lighting Co., Inc. equipment. All wiring, connections, and construction conform to the most stringent requirements of the law and your own desire for absolute safety. Each order is thoroughly inspected and tested before shipment.

Architects

In developing lighting equipment for the theatre we have found that the same principles of lighting apply to numerous lighting problems outside the theatre. A dramatic lighting enhances architectural beauty, especially in large spaces such as church interiors, memorial halls, galleries, rotundas, foyers, etc. Theatrical lighting equipment allows accurate control of the direction and quality of light, and the units lend themselves readily to permanent installation, being easily concealed.

Within the scope of this catalog we can only suggest the possibilities, but we are always pleased to co-operate with architects in the solving of individual problems.

Individual Problems

Whatever your particular lighting problem, whether in the theatre or out, our lighting experts will give you their best advice and, if you desire, make estimates on work and materials.



TERMS

PRICES—The prices quoted in this catalog are subject to change without notice.

Prices do not include crating, which will be charged at cost.

All contracts, agreements and shipments are contingent on strikes, fires, accidents, or other conditions beyond our control.

All orders must be in writing.

Shipments are made f. o. b. New York.

SHIPPING ORDERS—Always give detailed shipping instructions. If not given, we will use our best judgment in routing.

When materials are to be shipped to traveling companies, sufficient time must be allowed for shipment to reach destination.

As only experienced packers are employed, our responsibility ends when shipment is receipted for in good condition by the carrier. Consignee must hold carrier responsible for breakage, loss, or delay in transit.

TERMS OF PAYMENT—To firms or individuals of approved credit, 2 per cent, 10 days, net 30 days.

Remittances must be made in New York funds, Post Office or Express Money Order, or New York Draft.

All other shipments as follows: 25 per cent of bill must accompany order, and balance will be shipped C. O. D. If by freight, draft for balance with bill of lading attached will be sent to any designated bank; and shipment can be delivered on payment of draft.

GUARANTEE—All Display Stage Lighting Co., Inc. apparatus and effects are fully guaranteed to be perfect in material and workmanship. Any defects in material or workmanship will be promptly corrected, provided claim is made within five days of receipt of shipment; the defective parts being returned to us, charges prepaid, for examination.

While we will replace defective equipment at our own cost, no claims will be allowed for damages, material, or labor.

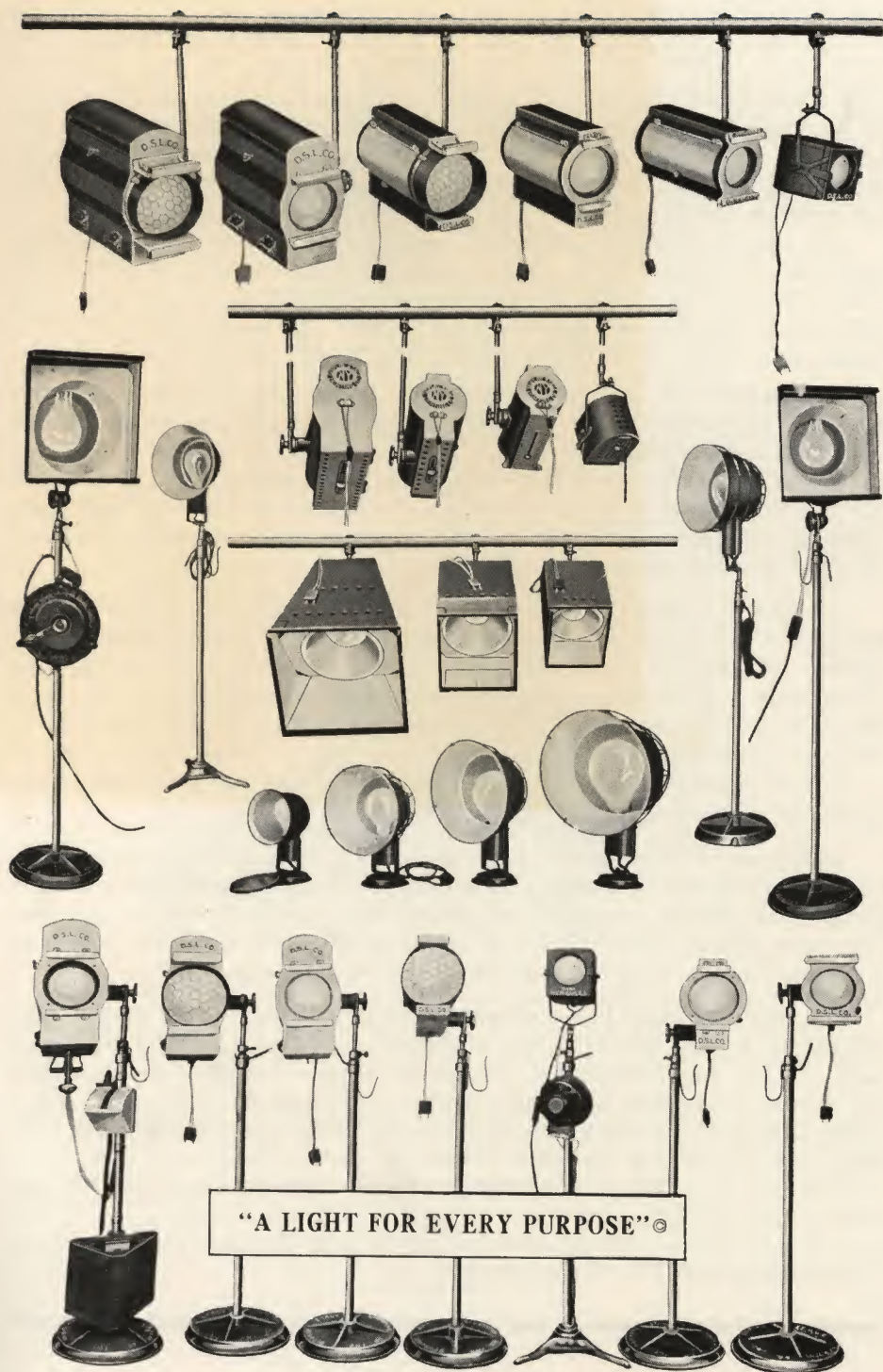
GOODS RETURNED—No materials are to be returned without our permission.

When writing give date of invoice. Returned goods must be properly marked, sent prepaid, and are subject to a charge for handling.

APPARATUS ON RENTAL—We keep on hand a stock of lighting equipment and effects for rental at contract rates, and can furnish expert operators when desired.

Conditions of rental are as follows:

- (1) All rentals are made on written contract for a specific time, and may be extended or renewed in writing only.
- (2) Rental charges are payable in advance.
- (3) Cartage charges must be paid both ways.
- (4) Cash deposit is required for full value of materials rented, or a written order from a bank or reputable business firm accepting responsibility for safe and prompt return of goods.
- (5) All materials are to be repacked in same shipping containers they were shipped in, and returned promptly at expiration of rental period.
- (6) Lessee to be responsible for all damage to materials, ordinary wear and tear excepted, from the time they leave our shipping department until their return to our receiving department.
- (7) We are not responsible for failure on the part of the carrier to make prompt and complete delivery, as our responsibility ends after the carrier has receipted for the shipment.
- (8) We are not responsible for incompetency on the lessee's part to handle our apparatus successfully.





"A LIGHT FOR EVERY PURPOSE"®

A LIGHT FOR EVERY PURPOSE was chosen as our slogan because it is literally true. The standard lighting equipment shown on the following pages embraces every practical type of high powered lighting unit in general use, and for specific purposes we are equipped to devise and produce specially designed lights and apparatus on short notice.

All lights, whether standard or special, have the same outstanding features of superiority in construction and workmanship which make them the best LIGHT FOR EVERY PURPOSE. Each light is designed and built for a long life of faithful service under the most gruelling conditions, even abuse, and it is on this that our good reputation is built.

Ventilation—On adequate ventilation depends largely the life of the lamp and the lens, and the successful operation of the apparatus. Proper ventilation also promotes safety.

The bottom, back, and top of all lights are made as open as possible for the free passage of air. The lens is suspended clear of the hood, allowing circulation around the lens, which tends to equalize the temperature and minimize breakage.

Flexibility—All lights are fitted with swing joint that they may be focused at any angle, whether mounted on stands or hung from a pipe batten. The weight is properly balanced on the swing joint, giving ease of movement and steadiness when "set." The Adjustable Pipe Clamp is an important factor of flexibility, allowing the light to be hung rigidly from a pipe batten at any angle.

Where necessary, lights are adjustable in focus and arranged to accommodate color mediums.

Reflecting Surfaces—We have perfected a full line of scientifically designed reflectors of oxidized aluminum known as "**Aluminide**" (Registered Trade Mark). Aluminide does not deteriorate, it is easily cleaned, and has a greater reflecting power than formerly used surfaces. It is now a special feature of all our standard flood lighting equipment.

Construction has been scientifically developed to combine light, weight, and small size with the strength to withstand all conditions of long use and rough handling. Aluminum is used for castings for front, back, bottom, and doors of spot lights, and whenever possible in other units. All castings which may be subject to strain are of malleable iron. Bolts and screws are standard thread.

Wiring, connections, and fittings are of standard make and highest quality procurable.

All equipment is constructed to comply with the requirements of the Underwriters and City Departments.

150 AMPERE ARC SPOT LIGHT



Fig. No. 10

The 150 Ampere Arc Spot Light has tremendous lighting power combined with mobility and ease of control. It focuses from a head spot to flood at 150 feet, and for extremely wide flood we have developed an Extension Flood Hood with extra size Color Frames. Follows with remarkable ease, due to accurate balance of hood on quadrant.

Hood has full louver top construction, which gives a maximum of ventilation. Arc Burner, mounted on sliding base, has Automatic Expansion Carbon Holders which prevent slipping and bad contact. Lens is held clear of the hood, allowing circulation of air around the glass. Rheostat is provided with a 200 ampere 2 pole main switch and two automatic switches, allowing light to start at 50 amperes, and only when burning can it be increased to 100 and then to 150 amperes.

Fig. No. 10 Complete with Extension Flood Hood; on telescoping stand mounted on castors; rheostat and switches attached; 25 feet 00 Stage Cable Price on application

Weight complete 480 lbs.



STANDARD ARC SPOT LIGHTS

Standard Arc Spot Lights are the most satisfactory lights for intense spot or flood lighting for the stage, balcony, or studio, and are particularly invaluable for the showing of Projective Effects, where intense light is required.

Hood construction is of planished iron reinforced with band iron, aluminum front, back, and bottom castings. Large spring door on side of hood gives ready access for adjustment of carbons and burner. Hood is properly balanced on a malleable iron swing joint and is easily controlled for following by the handle underneath. Grooves accommodate color frames, color wheels, effects, etc.

Ventilation is an important feature of this light. The entire bottom is perforated with half-inch holes for the free intake of cold air, and the heat passes out through back, top, and around the lens. The lens is held clear of the hood, allowing circulation of air equalizing the temperature on both sides of the glass.

The Arc Burner contained therein is the latest type, simple and fool-proof. Over-size screw feeds traveling in heavily constructed angular guides insure non-binding and positive alignment. An adjustment is provided for the raising and lowering which permits the centering of carbons. The carbon holders have a positive grip and accommodate carbons from $\frac{3}{8}$ to 1 inch. Both upper and lower carbon holders are adjustable and once set for certain size carbons require no further attention. The complete burner slides in a track and is controlled by a handle for instantly changing light from spot to flood.

To simplify operation of lamp all controls are located at bottom of hood, namely, handles for following, feeding carbons, centering carbons, and adjusting spread of light beam.

Standard Arc Spot Light is mounted on telescoping stand, having range from 3 to 5 ft. (unless otherwise specified) with a rheostat of the required amperage mounted thereon, an enclosed switch attached, asbestos wiring complete to rheostat, 25 ft. flexible stage cable and connector. Lamp operates on either direct or alternating current.

STANDARD ARC SPOT LIGHTS

(40 amperes)

For purposes of standardization Display Arc Lights are constructed in two different size lens openings, 6-inch fig. 100, and 8-inch fig. 315. By means of adapter fig. 130, 6-inch lens opening may be reduced to 5-inch. Adapter, fig. 129, reduces 8-inch opening to 6-inch which may in turn be reduced to 5-inch by fig. 130. This permits utmost flexibility in getting desired results by use of proper lenses.

To cover the range of projection there are two different lengths of hood, the standard, 16-inch, and the long distance, 20-inch. The 16-inch hood is practical for spot or flood lighting up to approximately 75 ft., and the 20-inch, or long distance hood, for spot or flood lighting up to approximately 150 ft.

The foregoing specifications cover all Arc Spot Lights listed herein.

8-inch lenses are provided with and held in place by a wire mesh guard which tends to equalize temperature and acts as a safeguard.

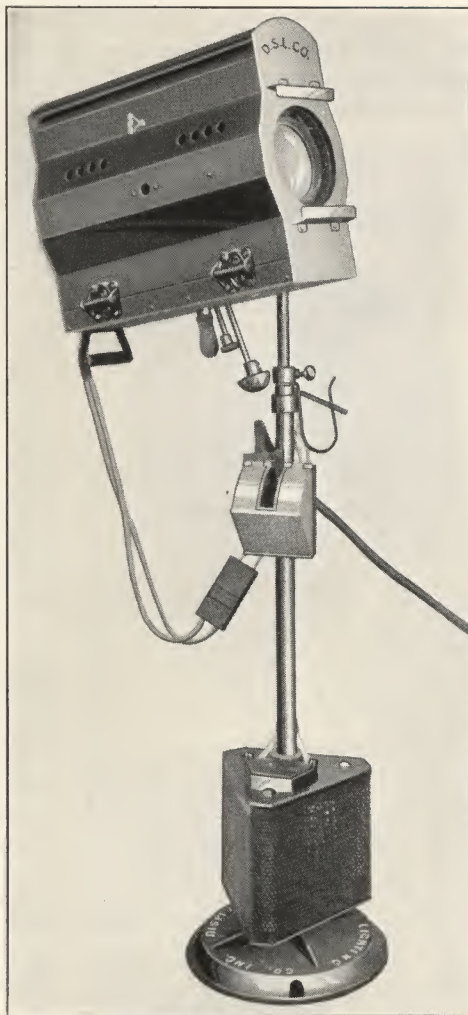


Fig. No. 100

Fig. No. 100 Standard Arc Spot Light complete as described \$53.00
Weight complete, with stand, 75 lbs.

Fig. No.	Amperes	VOLTS	LENS	HOOD LENGTH	WEIGHT	PRICE
300	70	125	8	20 inches	103	\$125.00
200	70	125	6	20 inches	102	110.00
310	40	125	8	20 inches	77	62.00
315	40	125	8	16 inches	76	60.00
135	40	125	6	20 inches	76	55.00
100	40	125	6	16 inches	75	53.00
320	25	125	8	20 inches	64	62.00
325	25	125	8	16 inches	63	60.00
250	25	125	6	20 inches	63	55.00
255	25	125	6	16 inches	63	53.00

STANDARD "MAZDA" SPOT LIGHT

(1000-1500-2000 watts)

Following step by step the development of the gas filled lamps, we have perfected our Standard "Mazda" Spot Light to a point of efficiency only to be obtained by constant experimental work along scientific lines.

The Mazda Spot Light is accepted universally because of its flexibility. The reasons are apparent, namely, less weight, steady burning on either direct or alternating current, the facility with which the intensity of light can be controlled, and the accurate blending of colors by means of dimmers.

The properly designed Mazda Spot Light permits the concentration of the beam where the light is actually required, thus eliminating all light waste. The spot light may be placed where most advantageous, suspended from a pipe batten, hung in front of a balcony rail (see page 10), used on portable standard or tormentor, hung in inaccessible places, used with motor driven color wheels or projective effects, and controlled singly or in groups by the house electrician at the switchboard.

Spot lights are made in various sizes to accommodate the concentrated filament Mazda lamp ranging from 250 to 2000 Watts.

Standard Mazda Spot Light has hood of same size and design as Standard Arc Spot Light, but replaces the arc burner with a Mazda lamp. Hood construction is of planished iron reinforced with band iron, aluminum front, back, and bottom castings. Large spring door on side of hood gives ready access for adjustment of socket and reflector. Hood is properly

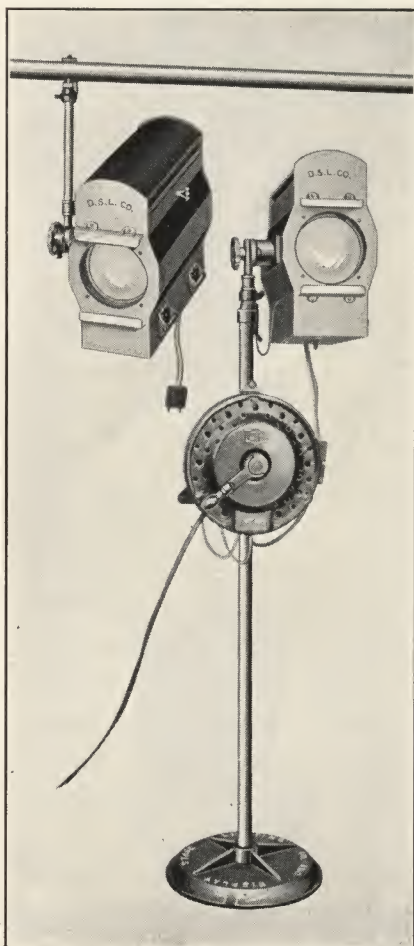


Fig. No. 503

Fig. No. 502

Weight, with stand, 55 lbs.; Hanging Type 32 lbs. Operates on either direct or alternating current.

Fig. No. 502 6-in. 1000-1500-2000 watt type spot light with spherical reflector complete on telescoping stand having range from 4 to 7 ft.; fitted with 15-amp. connector and 25 ft. stage cable.....\$40.00

Fig. No. 2424 1000-watt round type dimmer\$22.00

Fig. No. 503 6-in. 1000-1500-2000 watt type spot light with spherical reflector complete with adjustable pipe clamp, 60 ft. stage cable and 15-amp. full connector....\$39.50

STANDARD "MAZDA" SPOT LIGHT

(500-1000 watts)

balanced on a malleable iron swing joint. Grooves accommodate Color Frames, Color Wheels, Effects, etc. Ventilation is an important feature of this light. The entire bottom is perforated with half-inch holes for the free intake of cold air, and the heat passes out through back, top and around the lens. The lens is held clear of the hood, allowing circulation of air. Ventilation around the lens is important. It tends to equalize the temperature on both sides of the glass.

The socket carriage is constructed throughout of malleable iron, thus eliminating the possibility of breakage. Provision is made for the raising and lowering of socket for the centering of lamp filament, and also for the proper adjustment of reflector. The complete burner slides in a track and is controlled by a thumb screw under hood for instantly changing light from spot to flood.

All of our Mazda Spot Lights are fitted with $3\frac{3}{4}$ -inch Spherical Reflectors.

Any of the foregoing spot lights may be provided with 12-inch round type dimmer with special fitting for attaching it to standard. (See page 89).

For purposes of standardization, Standard Mazda Spot Lights are constructed in two different sizes, namely, 6-inch lens opening, fig. 502, page 10, and 8-inch lens opening, fig. 535, page 13. By means of adapter, fig. 130, 6-inch lens opening may be reduced to 5 inches. Adapter, fig. 129, reduces 8-inch opening to 6 inches, which may in turn be reduced to 5

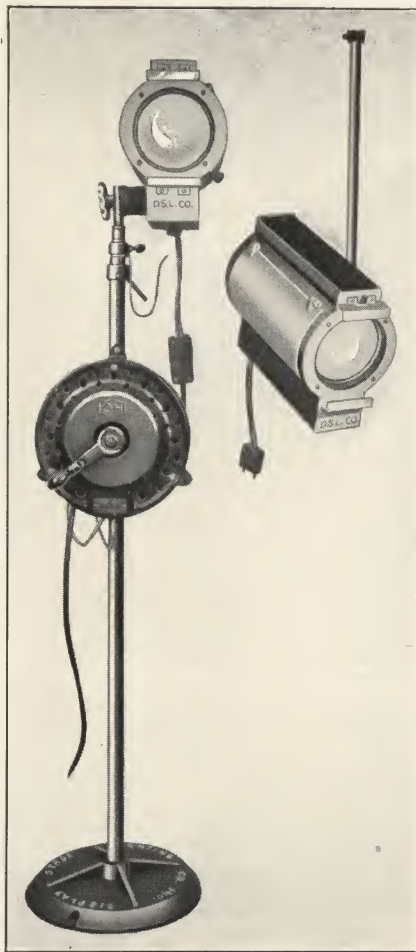


Fig. No. 600

Fig. No. 602

Fig. No. 600—6-in. 500-1000 watt type spot light with spherical reflector complete on telescoping stand having range from 4 to 7 ft.; fitted with 15-amp. connector and 25 ft. stage cable.....\$35.00

Fig. No. 2424 1000-watt round type dimmer\$22.00

Fig. No. 602 6-in. 500-1000 watt spot light with spherical reflector complete with adjustable pipe clamp, 60 ft. stage cable and 15-amp. full connector.....\$34.50



STANDARD "MAZDA" SPOT LIGHT

inches by fig. 130. This permits utmost flexibility in getting desired results by use of proper lenses.

To cover the range of projection there are different lengths of hoods. The standard 16-inch is most commonly used. The 16-inch hood is practical for spot or flood lighting up to approximately 75 ft.; the 20-inch or long distance hood for spot or flood lighting up to approximately 150 ft. Where space is limited the 12-inch hood may be used for fixed spot lighting. It is possible, however, to get different size spots by means of proper lenses.

Eight-inch lenses are provided with and held in place by a wire mesh guard which tends to equalize temperature and acts as a safeguard.

Standard Nitrogen Spot Light is mounted on telescopic stand having range from 4 to 7 ft. (unless otherwise specified), and furnished with 25 ft. flexible stage cable and connector. Following handle will be provided when specified (\$1.00 extra).

STAND TYPE SPOT LIGHT

Fig. No.	Lens	Length of Hood	Type—Watts	Price
530	8 inches	20 inches	1000-2000	\$60.00
535	8 inches	16 inches	1000-2000	55.00
685	8 inches	20 inches	500-1000	50.00
687	8 inches	16 inches	500-1000	45.00
689	8 inches	12 inches	500-1000	42.50
525	6 inches	20 inches	1000-2000	42.00
501	6 inches	16 inches	1000-2000	40.00
660	6 inches	20 inches	500-1000	37.00
600	6 inches	16 inches	500-1000	35.00
608	6 inches	12 inches	500-1000	33.00

Spotlights as described with spherical reflector, fitted with patented clamp hanger, 60 ft. stage cable and connector.

HANGING TYPE SPOT LIGHT

Fig. No.	Lens	Length of Hood	Type—Watts	Price
531	8 inches	20 inches	1000-2000	\$59.50
536	8 inches	16 inches	1000-2000	54.50
686	8 inches	20 inches	500-1000	49.50
688	8 inches	16 inches	500-1000	44.50
690	8 inches	12 inches	500-1000	42.00
526	6 inches	20 inches	1000-2000	41.50
503	6 inches	16 inches	1000-2000	39.50
661	6 inches	20 inches	500-1000	36.50
602	6 inches	16 inches	500-1000	34.50
610	6 inches	12 inches	500-1000	32.50

The types of lamps used in the foregoing hoods are as follows:

Fig. No.	Watts	Volts	Type	Base	Price
2803	500	110-120	G40	Mogul	\$3.25
2804	1000	110-120	G40	Mogul	6.75
2805	1500	110-120	G40	Mogul	9.00
2807	2000	110-120	G48	Mogul	13.00

Lamps for 220 volts are special and may be had on application.

SPOT LIGHT DIMMERS

Arranged for mounting on stand. Special round type dimmer with dead point which acts as a switch.

Fig. No.	Watts	Volts	Weight	Price
2422	500	110-120	6 lbs.	\$18.50
2424	1000	110-120	7 lbs.	22.00
2425	1500	110-120	13 lbs.	36.00
2426	2000	110-120	14 lbs.	38.00

For color frames, see page 56.

STANDARD "MAZDA" SPOT LIGHTS

(8-inch lens type)

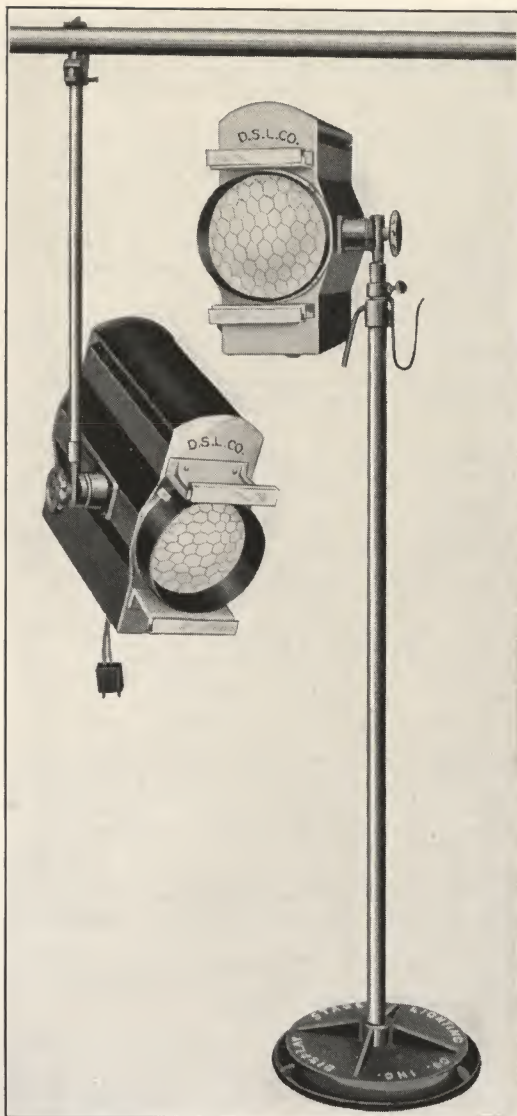


Fig. No. 536

Fig. No. 535

Fig. No. 535 8-inch 1000-1500-2000 watt type spot light with spherical reflector complete on telescoping stand having range from 4 to 7 ft.; fitted with 15-amp. connector and 25 ft. stage cable.....\$55.00

Fig. No. 536 8-inch 1000-1500-2000 watt type spot light with spherical reflector complete with adjustable pipe clamp, 60 ft. stage cable and 15-amp. full connector\$54.50

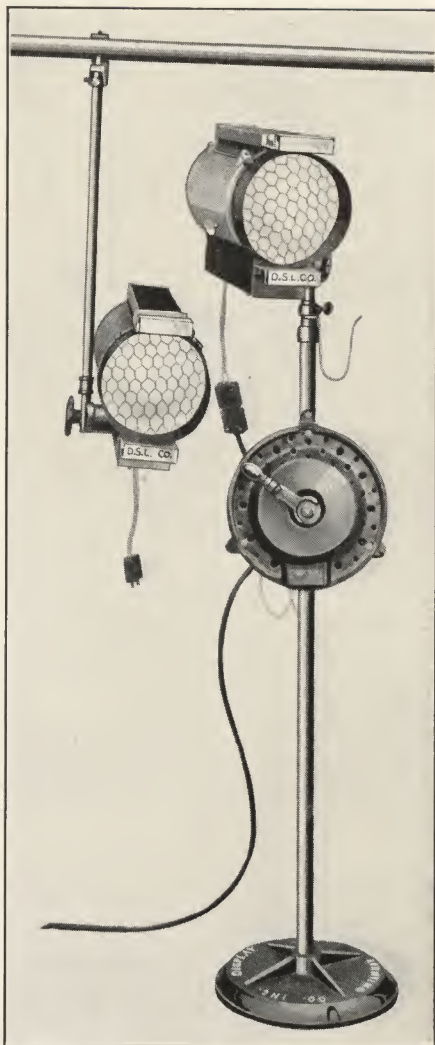


Fig. No. 688

Fig. No. 687

Fig. No. 687 8-inch 500-1000 watt type spot light with spherical reflector, complete on telescoping stand, having range from 4 to 7 ft., and fitted with 25 ft. stage cable and 15-amp. connector\$45.00

Dimmer for above.....\$22.00

Fig. No. 688 8-inch 500-1000 watt type spot light with spherical reflector, complete with adjustable pipe clamp, 60 ft. stage cable and 15-amp. full connector.....\$44.50

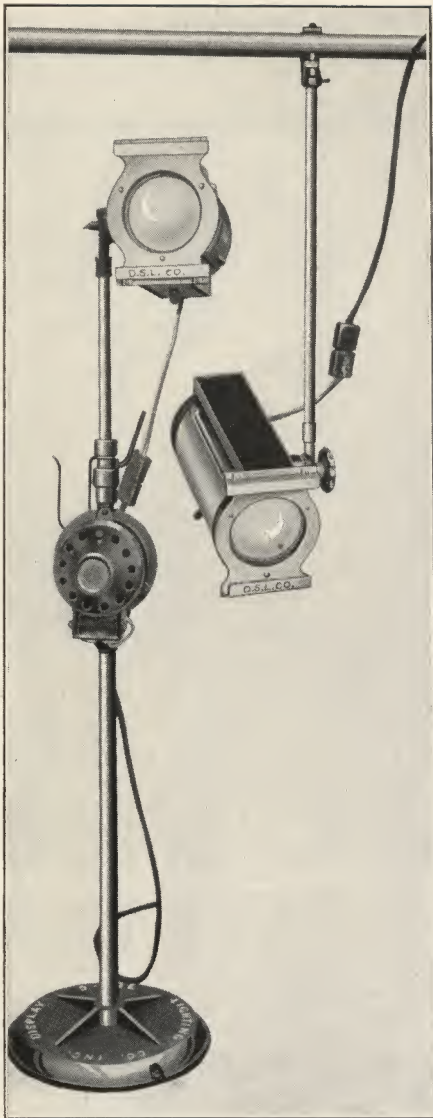


Fig. No. 700

Fig. No. 701

Fig. 974—Complete with 5-ampere connector, 35 ft. stage cable	\$12.00
Color frame	.35
250 watt G30 stereopticon lamp concentrated filament.....	\$1.75
400 watt G30 stereopticon lamp concentrated filament.....	3.00

FOCUSING BABY SPOT LIGHT

(250 TO 400 WATTS)

Where spot lighting of mild intensity is desired, the Focusing Baby Spot Light is an efficient unit, either on a stand or for a small hanging spot, its small size making it easy to conceal.

Has 5-inch lens; medium receptacle on sliding base for focusing; adjustable mirror reflector, which increases light intensity 100 per cent. Hood is 15 inches long, constructed of planished iron with aluminum ends and bottom casting, and has carefully planned ventilating areas in bottom, back, top, and around lens. Grooves for Color Frames.

Fig. No. 700 Complete on telescoping stand having range of 3 to 5 ft.; 5 amp. connector; 25 ft. stage cable\$27.50

Fig. No. 701 With adjustable pipe clamp for hanging; 5 amp. connector; 60 ft. stage cable\$27.00

300 watt dimmer.....\$16.00
Special round type dimmer with dead point.

250 watt G30 stereopticon concentrated filament lamp\$1.75

400 watt G30 stereopticon concentrated filament lamp\$3.00

Weight with stand and cable, 42 lbs.

Weight of hanging type, 19 lbs.

FOOT LIGHT BABY SPOT LIGHT

(PATENTS PENDING)

A small, easily concealed light, having same hood as our new Baby Hercules (patents pending). Principally used in foot light trough or wherever a small spot light is required.

Hood is stamped steel, thoroughly ventilated, has 5-inch lens, medium base receptacle on sliding carriage for adjusting focus. Additional focusing may be obtained where small spot is desired by means of our telescoping lens carrier. Equipped with spring clip device for holding Color Frame; front is removable, giving ready access to lamp.

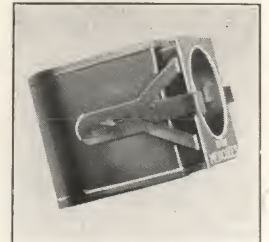


Fig. No. 974



THE NEW ALUMINIDE REFLECTORS

In stage lighting, as in nature, the principal source of light is from above. Various types of lighting units are used, the chief among them being the open flood light, because of its efficiency in covering a large area with an evenly diffused light. It is often suspended at a great height, however, and the importance of its being properly designed cannot be stressed too greatly.

Because we understood fully the vital importance of this particular phase of stage lighting, we called in the expert services of recognized lighting engineers. And now we may say that the net result of their tireless research and experimentation may be summed up in the one word, **Aluminide**.

Aluminide, so called by us and registered as a trade name, has shown such marked virtues as a surfacing material for reflectors that it has already revolutionized some phases of stage lighting.

It reflects more light, softer and whiter light, more evenly diffused light than anything heretofore used—and all that with less wattage! Furthermore, it is much more easily cleaned, and it does not deteriorate.

With Aluminide as a basis of construction our experts have designed and developed a new line of reflectors for our various flood light units. These reflectors are scientifically designed to project and distribute evenly diffused light over a large area.

The housings of all our Aluminide reflectors are designed not only to support and protect the reflectors, but also to perform certain specific duties. In all cases we find that by seating our reflector deeply into housing, we not only project a powerful light directly from reflector, but by utilizing the walls of housing, which extend below the reflector we deflect the rays, which might otherwise be wasted, to a desired area, thus giving as a result an evenly diffused light, instead of greater brightness at the source (see illustration Fig. No. 4000, page 20). This is particularly valuable where space is limited and it is necessary to suspend lighting units close to drop or cyclorama, or where it is necessary to light from a great height.

STAND TYPE ALUMINIDE FLOOD LIGHT

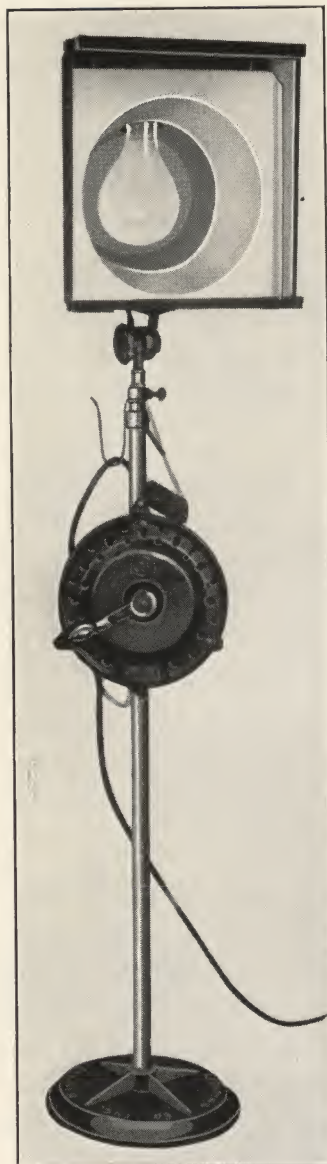


Fig. No. 1101

Fig. No. 2424 1000-watt special
 round type dimmer having
 deadpoint\$22.00
 Fig. No. 2827 1000-watt PS 52
 lamp\$3.75

Fig. No. 1101. 1000-
 Watt Portable Flood
 Light. An open hood
 14 in. x 15½ in. light
 opening, constructed
 of galvanized iron,
 well ventilated, hous-
 ing a scientifically
 designed Aluminide
 reflector, fitted with
 mogul receptacle,
 grooves for color
 frames, Fig. No.
 1875, page 56, and
 swing joint at bot-
 tom for angling,
 mounted on telescop-
 ing stand having
 range from 4 to 7
 feet, furnished with
 25-ft. cable and 15-
 ampere connector.

\$24.50

Fig. No. 1129. 500-
 Watt Portable Flood
 Light is similar in
 construction to the
 1000-watt described
 above. The hood
 opening is 14 inches
 x 14 inches, grooves
 are provided for
 color frames, Fig.
 No. 1876, page 56,
 complete on tele-
 scoping stand, hav-
 ing range from 4 to
 7 feet, with 25-ft.
 cable and 5-ampere
 connector\$20.50

Fig. No. 2422 500-watt special
 round type dimmer having
 deadpoint\$18.50
 Fig. No. 2825 500-watt PS 40
 lamp\$2.00

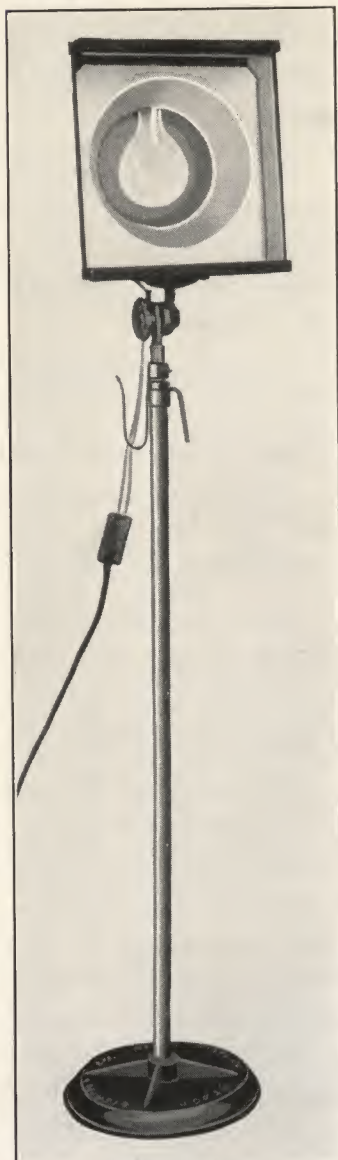


Fig. No. 1129

HANDY PORTABLE FLOOD LIGHTING UNITS

A series of Aluminide Reflectors designed as compactly as possible for maximum efficiency for various size pear-shaped lamps, the socket enclosed in metal, arranged with yoke for angling, mounted on a base which may serve as a standard or which may be fastened to wall or ceiling.

These units are light in weight, portable, reinforced with a wire cage. They are extremely useful for covering a large area with a powerful well diffused white light. For outdoor use these lights are equipped with superservice cable and galvanized cage.

Aluminide absorbs yellow rays and gives an evenly diffused white light especially valuable for photographic use. We recommend Aluminide for window lighting, show room lighting, display lighting, advertising, chautauquas, parks, vaudeville, stage, photography, home, movies, light screens, gymnasiums, prize fight rings, exhibits, expositions, skating rinks, tennis courts, playgrounds, band stands, pageants, etc.

Fig. No. 5000	1000 Watt	.....	\$24.50
Fig. No. 5010	300-500 Watt	.....	20.00
Fig. No. 5020	200 Watt	.....	15.00
Fig. No. 5030	100-150 Watt	.....	12.50

Furnished with 8-ft. cord, terminating in a separable plug on 3 smaller sizes.

Color Frames for above:

Fig. No. 5001	1000 Watt	.....	\$3.00
Fig. No. 5011	300-500 Watt	.....	2.50
Fig. No. 5021	200 Watt	.....	1.75
Fig. No. 5031	100-150 Watt	.....	1.50

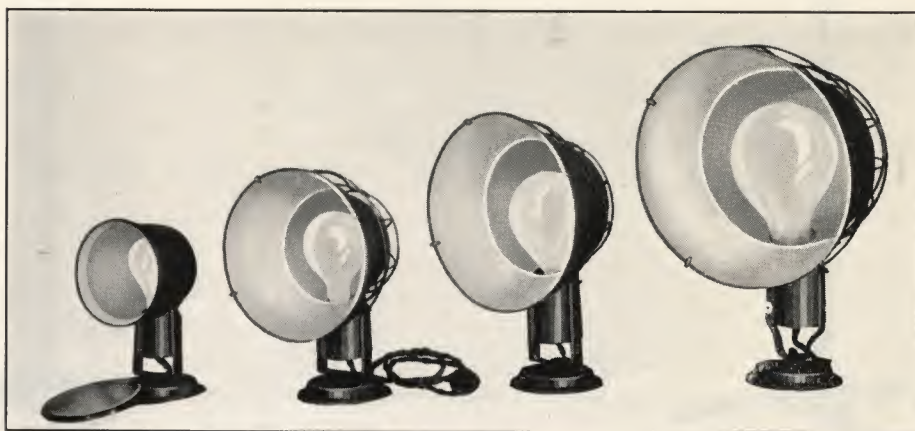


Fig. No. 5030

Fig. No. 5020

Fig. No. 5010

Fig. No. 5000



BABY HERCULES COMBINATION SPOT AND FLOOD LIGHT

(PATENTS PENDING)

Especially adapted to the small theatre, or wherever a flood of light is desired over a small area, the versatile Baby Hercules plays another rôle as the smallest flood light unit of practical use. For a glow of light, often colored, in a window, alcove, or from a fireplace, it is ideal. Baby Hercules Flood Light is easy to conceal. It is designed to reflect and intensify light. Hood has spring clip device for No. 1893 (page 56) Color Frame, and a sliding lamp base for adjusting the area of light thrown.

The hood is constructed of stamped steel, finished in dull black, swung in a malleable iron yoke, mounted on a crowfoot base telescopic stand, having a range of 3 to 5 ft. The hood is thoroughly ventilated at top, back, bottom, and around lens.

Thumb screw at bottom for focusing has a 3-in. range of adjustment, the entire front containing the lens is telescopic, allowing the further adjustment of 2 ins. This makes possible the focusing from a 2-ft. spot to a 10-ft. spot at a 10-ft. range. It is fitted with a reflector and when front is removed can be used as a flood light.



Fig. No. 975 Complete on telescopic stand; range 3 to 5 ft.; 5-ampere connector; 25 feet stage cable.....\$18.00

OUTDOOR FLOOD LIGHT

A specially designed apparatus for flood lighting large areas, especially out-of-doors, as for pageants, athletic events, parades, etc. A deep oval hood; opening 20 ins. high, 30 ins. wide, 24 ins. deep; contains 2 mogul base receptacles for 1000-watt Mazda lamps. Hood is fitted with Aluminide reflectors, which intensify and project the light outward, and has an adjustable hood arranged to deflect the light downward when necessary. Light weight of apparatus makes it easy to move and direct on desired points by means of swing joint.



Two ventilators above the lamps insure coolness around lamps. Waterproof covers over ventilators keep all connections dry. Outdoor Flood Light is furnished complete, wired with two 15-ampere connectors and two 25-ft. lengths stage cable; swung in yoke, mounted on telescoping heavy base stand having range 3 to 5 ft. with swing joint. Outdoor Flood Light may also be furnished with swing joint and heavy flange. A special Color Frame Holder with Color Frame may be had if desired.

Fig. No. 1152	Outdoor Flood Light complete on telescoping stand.....	\$65.00
Fig. No. 1153	Outdoor Flood Light complete with swing joint and flange.....	60.00
Fig. No. 1157	Color Groove attachment with Color Frame (extra).....	10.00
Fig. No. 5108	Color Frame only.....	2.25
Fig. No. 2827	1000-Watt PS 52 lamp.....	4.00
Fig. No. 2828	1500-Watt PS 52 lamp.....	5.50

HANGING FLOOD LIGHTS

The housings for all of our units are constructed of galvanized iron, exceptionally well ventilated, strongly reinforced at all points, and as compact as possible, and arranged with grooves for holding color slides. For suspension, adjustable malleable iron pipe clamp hangers (patented) are used where practical. The clamps securely fasten on pipe up to 1½ ins. (Patents Pending.)

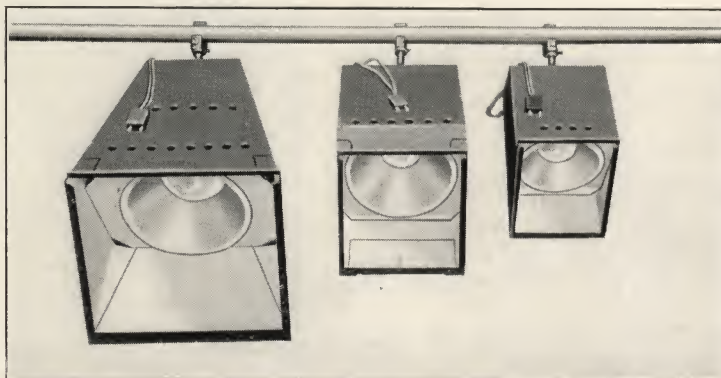


Fig. No. 4000

Fig. No. 4010

Fig. No. 4030

1000-WATT HANGING FLOOD LIGHT

An open hood, 18 in. by 20 in. light opening, and containing one mogul receptacle for 1000- or 1500-watt lamp. It is designed principally for hanging from border battens, with the malleable iron pipe clamp (patented) arranged so that center of gravity is in center of hood. Hood is galvanized iron fitted with scientifically designed Aluminide reflector to intensify and project the light over a wide area.

The reflector is held clear of the hood which is ventilated front, back, and top, allowing air to circulate around reflector. Grooves for color frames Fig. No. 1875.

Fig. No. 4000 Complete with adjustable pipe clamp, 15-ampere connector, 60-ft. Stage Cable\$22.50
 Fig. No. 2827 1000-Watt PS 52 lamp 4.00

500-WATT HANGING FLOOD LIGHT

Same construction, smaller in size than 1000-watt Hanging Flood Light, accommodating only 500-watt lamp. Light opening 13 ins. by 15 ins. Color Frames Fig. No. 5103.

Fig. No. 4010 Complete with Adjustable Pipe Clamp, 5-ampere connector, 60-ft. Stage Cable\$18.50
 Fig. No. 2825 500-Watt PS 40 lamp 2.00

300-WATT HANGING FLOOD LIGHT

Same as 500- and 1000-watt Hanging Flood Light above, accommodating a 300-watt lamp in mogul base. Light opening 13 ins. by 15 ins. Color Frames Fig. No. 5102.

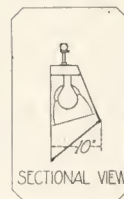
Fig. No. 4020 Complete with Adjustable Pipe Clamp, 5-ampere connector, 60 ft. Stage Cable\$16.50
 Fig. No. 2824 300-Watt PS 35 lamp 1.25

200-WATT HANGING FLOOD LIGHT

Similar in size and design to the 300-watt lamp listed above, takes a 200-watt lamp.

Fig. No. 4030 Complete with Adjustable Pipe Clamp, 5-ampere connector, 60 ft. Stage Cable\$14.00
 Fig. No. 2823 200-Watt PS 30 lamp80

PORTABLE FLOOD LIGHTING BORDERS



Portable Flood Lighting Borders are similar in construction to the single flood lighting units, arranged in standard sections, each outlet having an Aluminide reflector and grooves for holding color frames. A partition between outlets prevents the possible leakage of light from one compartment to another.

The housing is constructed of galvanized iron, which extends well below the reflector, affording additional reflecting surface and controlling the direction of light. Provision is made for a maximum amount of ventilation without any light leakage. Swing joints on ends allow section to be hung from batten by means of clamp hanger, permitting the tilting of the entire section.

Portable sections are not only used for traveling productions, but owing to their flexibility are particularly adaptable to the newer method of stage installations (see below).

Standard sections are wired for three colors, unless otherwise specified. Wiring terminates at both ends into connectors, permitting the connecting of two or more sections when used as a border light.

Fig. No. 4200 1000-watt type, wired on 18-inch centers with color frames, to order.....Price on application

Fig. No. 4220 500-watt type, wired on 14-inch centers with color frames and adjustable pipe clamps:

6-outlet section	\$66.00
9-outlet section	99.00
Special lengths to order.....	Price on application

Fig. No. 4240 300-watt type, wired on 10-inch centers, with color frames, to order.....Price on application

Fig. No. 4260 200-watt type, wired on 10-inch centers, with color frames and adjustable pipe clamps:

6-outlet section	\$48.00
9-outlet section	72.00
Special lengths to order.....	Price on application

Cables, connectors and lamps extra.

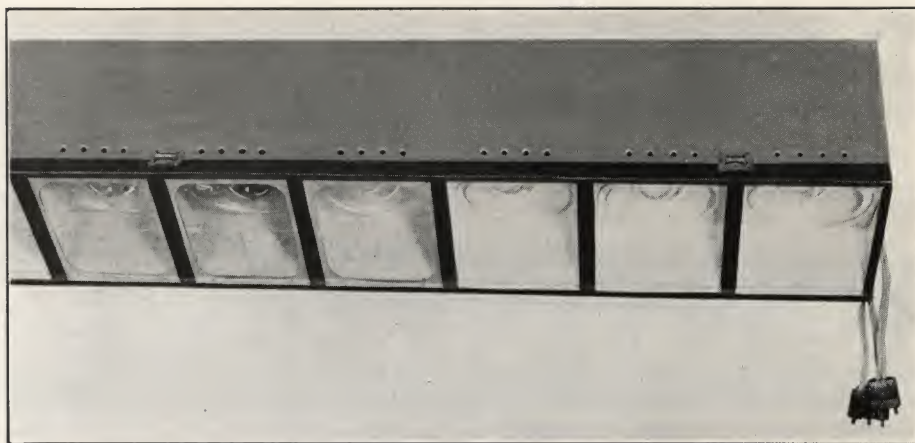


Fig. No. 4220

COMPARTMENT TYPE ALUMINIDE BORDER LIGHT

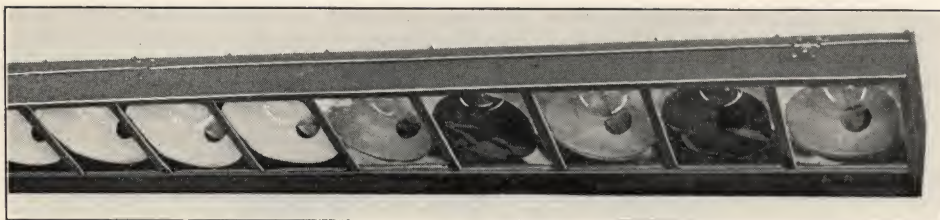


Fig. No. 4280

Adequately ventilated, enclosing lamps on three sides, divided into compartments, each containing one medium base receptacle on 6-inch centers which accommodates nitrogen lamps up to 150 watts. Grooves on face of each compartment for color frame Fig. No. 1892, page 56. Each compartment is fitted with a scientifically designed Aluminide reflector. All wiring enclosed and arranged with chain hangers. When two or more sections are to be used, cable is extended in bushed openings.

Fig. No. 4280 100-150 watt, wired on 6-inch centers, 15 outlets, overall length 7 ft. 6 ins., color frames\$56.25

Cables, connectors and lamps extra.

DIPPED OR NATURAL COLOR LAMP BORDER LIGHT STRIPS

May be used as proscenium lights, in entrances, back of transparencies and ground rows, as border or foot lights. Medium base receptacles are mounted in galvanized iron trough, having curved reflector in back of lamp sockets. Special white reflecting surfaces throughout. Constructed in 8-ft. lengths with 30 outlets accommodating lamps up to 60 watts; wired 1, 2, or 3 circuits for color and arranged with chain hangers.

Fig. No. 1225 8-ft. section, 30 outlets (wired for 3 circuits, unless otherwise specified) ..\$30.00

Cables, connectors and lamps extra.



Fig. No. 1225

BABY HERCULES BORDER

(PATENT PENDING)

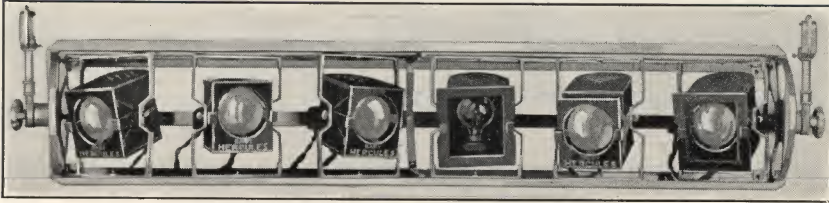


Fig. No. 1290

The Baby Hercules Border is an innovation in theatrical lighting, being the first focusing border apparatus successfully developed.

The source of light in nature is overhead, and modern stagecraft, striving for a closer portrayal of nature, uses foot lights less and depends more on overhead lights, using accents of strong illumination over chosen centers of action for dramatic effect.

Suspended on a pipe batten as a first border light, a battery of Baby Hercules Border sections gives the flexible light control needed for spotting and flooding chosen areas. Each section contains 6 Baby Hercules combination spot and flood lights mounted in a malleable iron and steel frame, each light moving independently of the rest, permitting light to be directed to different points simultaneously. The entire frame rotates on swing joints at each end. The lights can be set by the thumb screws or can be left sufficiently movable to allow changes between acts with the aid of a border pole. Each light is wired to separate connector, permitting control in circuits as desired. Lights may also be removed from frame and used elsewhere.

Each Baby Hercules Spot Light is constructed of stamped steel; finished in dull black, rust-proof finish, adequately ventilated; arranged to take 250-watt type G30 Concentrated Filament lamp, mounted with mirror reflector on sliding base; has 5-in. Imported Condensing Lens, and spring clip device for Color Frame No. 1893. Thumb screw at bottom for focusing has a 3-in. range of adjustment. The entire front containing the lens is telescopic, allowing a further adjustment of 2 ins. This enables the focusing from a small, concentrated spot to a flood. The front is removable, allowing access to the lamp, or may be used without front for flood lighting.

Weight of section containing 6 lights, 85 lbs. Compactly constructed to occupy minimum space and travel safely. Length over all, 6 ft., 7 ins.; diameter of frame, 14 ins.

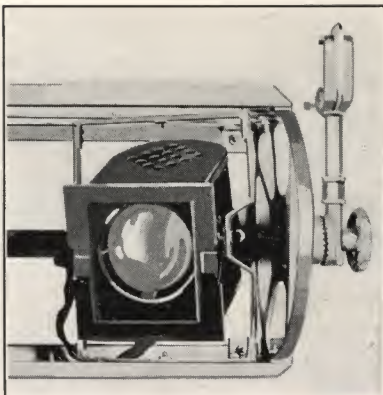


Fig. No. 1290 Baby Hercules Border complete; 6 Baby Hercules Spot Lights, six 5-ampere full connectors; 2 adjustable pipe clamps; 2 sets Color Frames Fig. No. 1893.....\$120.00

250-watt G30 concentrated filament lamps, each	\$1.75
400-watt G30 concentrated filament lamps, each	\$3.00

Lamps and cable extra



PORTABLE FOOT LIGHT

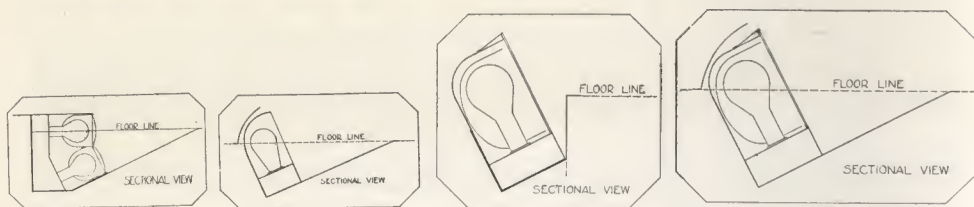
Foot lights are in general use in schools, auditoriums, lodge rooms, lecture halls, carried by travelling attractions; and for this purpose we list various types suitable for different conditions. (See page 25.)

Portable foot lights are constructed in sections that may be set on stage level, suspended in front of and below level of stage on brackets, or set in foot light trough built into stage.

This trough may be closed with sectional covers when foot light is not in use, completely concealing trough. These sections, when not required as foot lights, may be used elsewhere. Where two or more sections are to be used, cables extend through bushed openings terminating in connectors.

Aluminide foot lights are beyond doubt the most efficient foot light constructed where a volume of light is required. The housing is of galvanized iron, adequately ventilated, divided into compartments, each containing an Aluminide reflector and one medium base receptacle, arranged on 6-in. centers, each compartment arranged to take Color Frame No. 1892, page 56, or, when used with a glass medium, will take natural color glass. Either a 60-watt Type A, 100-watt Type A, or 150-watt PS lamp may be used in this type foot light.

Portable Aluminide foot lights are furnished in 7-ft., 6-in. lengths, and wired on 3 circuits with 15 outlets (unless otherwise specified).



Sectional Views of Foot Lights



Fig. No. 4050

PORTABLE FOOT LIGHT

Where two or more sections are to be used, cables extend through bushed openings terminating in connectors.

Fig. No. 4050 Aluminide compartment foot light, 7-ft., 6-in. section, 15 outlets, wired 3 circuits, with one set Color Frames.....\$56.25

Cables, connectors and lamps extra.

60 watt A-21 lamps.....	\$.25
100 watt A-23 lamps.....	.40
150 watt PS-25 lamps.....	.60

Natural colored glass mediums can be furnished in the following colors:

Fig. No. 5150	6-in. blue glass mediums
Fig. No. 5151	6-in. red
Fig. No. 5152	6-in. amber
Fig. No. 5153	6-in. green
Fig. No. 5154	6-in. clear

DIPPED OR NATURAL COLOR LAMP FOOT LIGHT

Dipped or Natural Color Lamp Foot Lights, constructed of galvanized iron, having curved reflector with special white reflecting surface. Sections are usually made in 8-ft. lengths containing 30 outlets, wired on 3 circuits (unless otherwise specified). Will accommodate up to and including 60-watt lamps.

Where two or more sections are to be used, cables extend through bushed openings terminating in connectors.

Fig No. 1228 8-ft. section, 30 outlets (wired for 3 circuits, unless otherwise stated)...\$30.00
Cables, connectors and lamps extra.

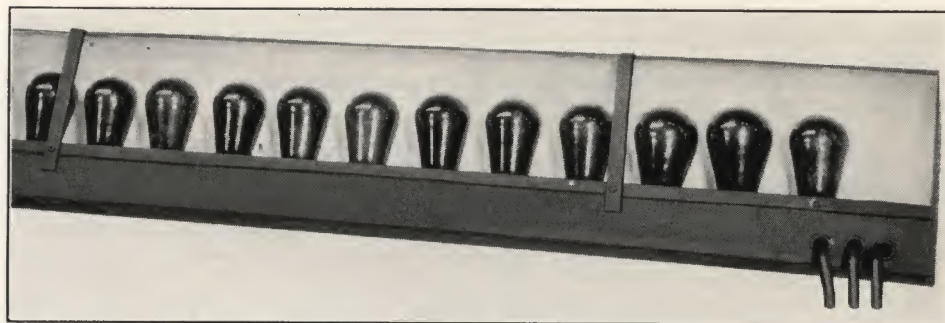


Fig. No. 1228

PORTABLE ENTRANCE STRIPS

Portable Entrance Strips for lighting from wings, back of ground rows, transparencies, etc. A trough constructed of galvanized iron, divided in individual compartments in which are mounted medium base receptacles with enclosed wiring. The inside of trough has special white reflecting surface, finished black outside, arranged with hooks for suspending from wings, wired one circuit, and furnished with 25 ft. No. 14 cable.

Fig. No. 1200	2-light section, length 1 ft., 5 ins.....	\$ 4.70
Fig. No. 1201	4-light section, length 2 ft., 9 ins.....	7.50
Fig. No. 1202	6-light section, length 4 ft.....	10.00
Fig. No. 1203	8-light section, length 5 ft., 4 ins.....	12.30
Fig. No. 1204	10-light section, length 6 ft., 8 ins.....	14.00
Fig. No. 1205	12-light section, length 8 ft.....	15.30

SKELETON STRIP LIGHTS

Skeleton Strip Lights are used for indirect lighting from concealed sources, as in cove and marquee lighting, or other architectural installation, and for foot lights and proscenium strips. Medium base receptacles are mounted 4 or less to the foot in a galvanized trough, which conceals all wiring. Sections are furnished to required length, either straight or curved, wired to any number of circuits for 1, 2 or 3 colors.

Prices on application.

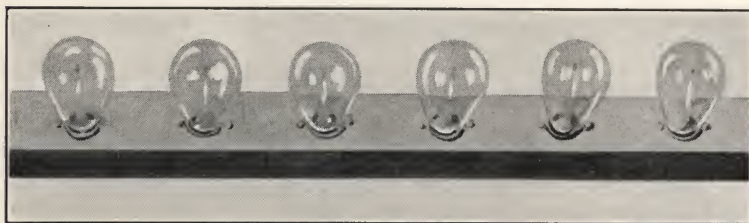


Fig. No. 1260

COVE LIGHTING

(See Fig. No. 1260)

Cove Light Strips for indirect lighting from concealed sources, medium base receptacles, are mounted up to four lights to the foot in a galvanized iron trough, which conceals all wiring. Sections are furnished to required length, either straight or curved, wired any number of circuits, one, two or three. State whether straight or curved, number of lights per foot, and number of circuits. Prices on application.

ALUMINIDE ENTRANCE STRIPS—STAND TYPE

Aluminide Entrance Strips are mounted on leather tire caster base and used in entrances where a large volume of light is required. Owing to their flexibility, they make a very useful item on any stage. These are made in three types, the 150-watt, the 200-watt, and the 300-500-watt type. The housing is constructed of galvanized iron, each compartment furnished with an Aluminide reflector and grooves for holding Color Frame. In practice, the colors would correspond to those in border lights, and be connected to stage pockets and operated in conjunction with overhead borders. Wired 3 circuits, cables extending through bushed openings; furnished with 3 25-ft. lengths cable. (See page 27.)

ALUMINIDE ENTRANCE STRIPS CASTOR BASE

Fig. No. 4400 To take up to 150-watt lamps; 8-ft., 9-in. sections; 15 lights arranged with grooves for Color Frames or for glass color medium; one set Color Frames, Fig. No. 5105; 3 25-ft. lengths cable. To order.

Natural color glass mediums: blue, red, amber, green, clear, to order.

Fig. No. 4420 200-watt type; wired for 9 receptacles on 3 circuits; sections are 8 ft., 3 ins. long, arranged with grooves for Color Frames; one set Color Frames Fig. No. 5106; 3 25-ft. lengths cable. To order.

Fig. No. 4440 500-watt type; wired for 6 receptacles on 3 circuits; sections are 7 ft. long, arranged with grooves for Color Frames; one set Color Frames Fig. No. 5107; 3 25-ft. lengths cable. To order.

Lamps, connectors and glass colored mediums extra.

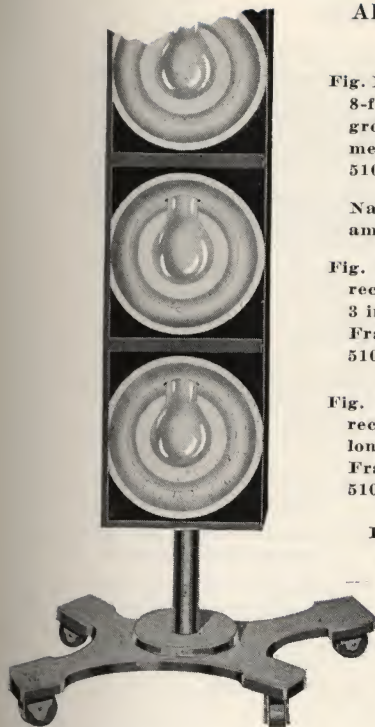


Fig. No. 4400

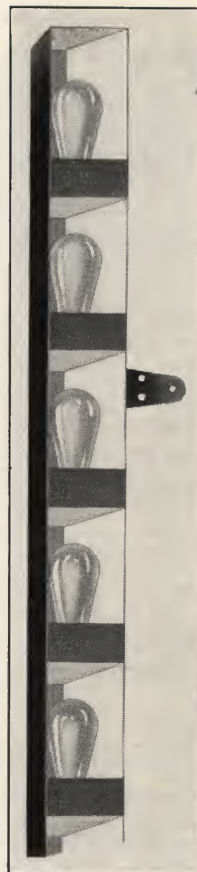


Fig. No. 1256

PERMANENT ENTRANCE STRIP LIGHTS

Fig. No. 1254	2 light; 1 ft., 5 ins.....	\$4.70
Fig. No. 1255	4 light; 2 ft., 9 ins.....	7.50
Fig. No. 1256	6 light; 4 ft.....	10.00
Fig. No. 1257	8 light; 5 ft., 4 ins.....	12.30
Fig. No. 1258	10 light; 6 ft., 8 ins.....	14.00
Fig. No. 1259	12 light; 8 ft.....	15.30

Arranged with hinges for permanent installation, with white painted surface reflector. Special length strips to order.

BABY HERCULES COMBINATION SPOT AND BORDER LIGHT

Especially invaluable as a first border light on a permanent installation.
(See page 23, Fig. No. 1290.)

PERMANENT INSTALLATION

The Border Light—Following our practice of standardization, we have concentrated on the following types of border lights to cover all the requirements for permanent stage installation.

Aluminide Border Light—The Aluminide reflector in these border lights is a recent development, scientifically designed to project and distribute a maximum, evenly diffused light over a large area.

Laboratory tests show these reflectors to be the most efficient designed for stage lighting. As Aluminide is an oxidized process, it does not deteriorate when exposed to intensive heat, and is easily cleansed with soap and water.

The housing is constructed of galvanized iron, which extends well below the reflector, affording additional reflecting surface, and controlling the direction of light. Provision is made for a maximum amount of ventilation without any light leakage. The border is divided in compartments, each compartment having an outlet with Aluminide reflector and grooves for holding Color Frame. A partition between outlets prevents the possible leakage of light from one compartment to another. Wired on circuits as required for any number of colors, with splicing box at one end (specify right or left facing audience). Painted black outside, properly braced, and furnished with chain for hanging.

Fig. No. 4235 500-watt type, wired on 14-in. centers, mogul sockets, complete with one set color frames Fig. No. 5103. Special lengths to order.

Fig. No. 4255 300-watt type, wired on 10-in. centers, mogul sockets, complete with one set color frames Fig. No. 5102. Special lengths to order.

Fig. No. 4275 200-watt type, wired on 10-in. centers, medium base socket, complete with one set color frames Fig. No. 5101. Special lengths to order.

Fig. No. 4295 100- to 150-watt type, wired on 6-in. centers, medium base socket, complete with one set color frames Fig. No. 1892. Special lengths to order.

Natural colored glass mediums may be used in place of gelatine frames.

Lamps and cable extra.

DIPPED OR NATURAL COLOR LAMP BORDER LIGHT

Dipped or Natural Color Lamp Border Light is constructed of galvanized iron with curved hood, finished white inside, black outside, contains medium base receptacles on 3-, 4- or 6-in. centers, wired on circuits (usually arranged for three colors), strongly braced, chain hangers for suspending from pipe batten and splicing box at one end.

When ordering state length desired, number of circuits, number of colors, wattage of lamps, splicing box location whether right or left facing audience.

Fig. No. 1227 To accommodate up to and including 60-watt lamps 2 lights per ft.
3 lights per ft.
4 lights per ft.

Prices on application.

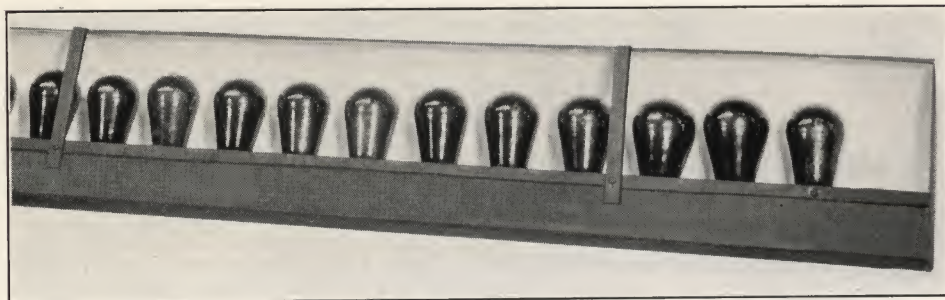


Fig. No. 1227

THE FOOT LIGHT

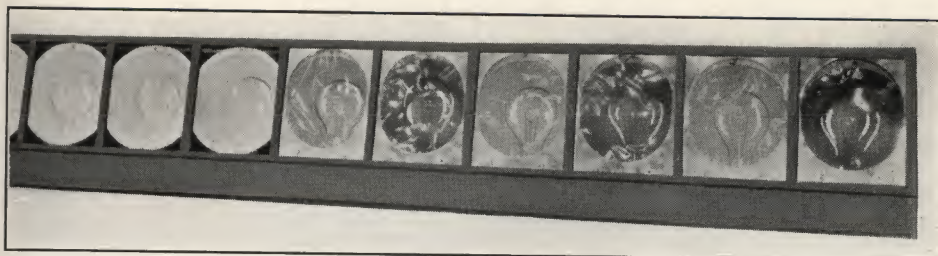


FIG. No. 4300 ALUMINIDE COMPARTMENT FOOT LIGHT

Fig. No. 4301 Aluminide Compartment Foot Light, housing is of galvanized iron, adequately ventilated, strongly braced, divided into compartments, each containing an Aluminide reflector and one medium base receptacle, arranged on 6-in. centers. Each compartment arranged to take color frame Fig. No. 1892, page 56, or, when used with a glass medium, will take natural color glass. Either a 60-watt type A, 100-watt type A, or 150-watt PS lamp may be used in this type foot light, wired on required number of circuits (usually arranged for three colors) with splicing box at one end. Can furnish with or without apron.

When ordering state length desired, number of circuits, number of colors, wattage of lamps, splicing box location whether right or left facing audience.

Fig. No. 4300 Wired, receptacles on 6-in. centers, straight, foot light with apron.
On application

Fig. No. 4301 Wired, receptacles on 6-in. centers, straight, foot light without apron.
On application

Fig. No. 4302 Wired, receptacles on 6-in. centers, curved, foot light with apron.
On application

Fig. No. 4303 Wired, receptacles on 6-in. centers, curved, foot light without apron.
On application

When ordering curved foot lights, give radius.

DIPPED OR NATURAL COLOR LAMP FOOT LIGHTS

Dipped or Natural Color Lamp Footlights (Fig. No. 1229) are constructed of galvanized iron, with curved hood, finished white inside, black outside, contains medium base receptacles, 3-, 4- or 6-in. centers, wired on circuits (usually arranged for 3 colors), strongly braced, splicing box at one end.

When ordering state length desired, number of circuits, number of colors, wattage of lamps, splicing box location whether right or left facing audience.

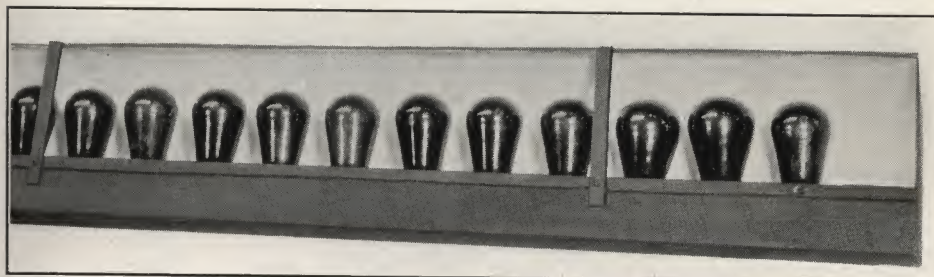


Fig. No. 1229

DISPLAY CONCEALED ALUMINIDE COMPARTMENT- TYPE FOOT LIGHTS

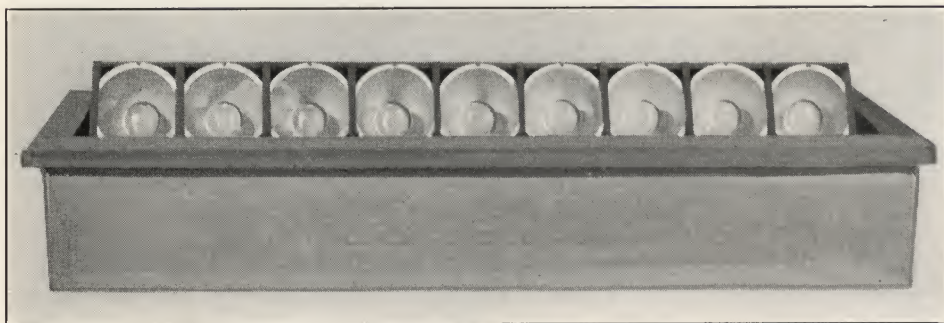


Fig. No. 4316 Opened

The Display Concealed Compartment Type Aluminide Foot Light is an innovation in stage foot lighting where temporary lighting is used. It is constructed so as to permit it to be flush down with floor of the stage when closed. It is particularly adaptable in schools, clubs, lodge rooms, auditoriums and lecture halls. They are furnished in complete standard 5-foot sections that contain 9 receptacles, each receptacle with an Aluminide reflector, wired for 3 circuits, with grooves for color frames. The trough is made of a metal that is approved by the New York Board of Fire Underwriters. The supports are pivoted and attached to an oak wood frame. The oak wood panel which is fastened in back of the trough serves as part of the stage floor when the foot light is closed.

Each section of the Aluminide Compartment Type Foot Light is furnished with a ring-pull and lock which is flush, and when the foot light is opened it is held in position by the attached spring catch. The frame and panel is constructed and put together in such a manner as will prevent warping.

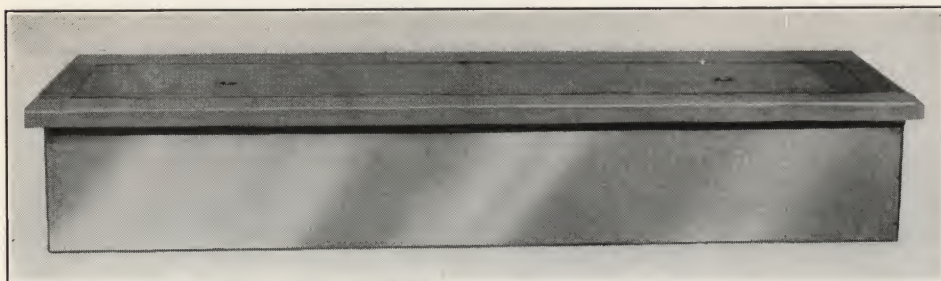


Fig. No. 4316 Closed

Fig. No. 4316 Display Concealed Aluminide Compartment Type Foot Light, with 9 receptacles, wired 3 circuits, on 6-inch centers, with Aluminide reflectors. Grooves for color frames. Furnished complete with oak wood in 6-foot sections.....\$80.00

PROSCENIUM STRIPS

The trough is constructed of galvanized iron, usually 20-in. gauge, arranged with individual compartments, in which are mounted medium base receptacles with enclosed wiring; inside of trough has special white reflecting surface, finished black outside, arranged with strap hinges, wired one circuit for 22 60-watt outlets, 15 ft. over all, with splicing box at bottom.

The Proscenium Strips are made in several designs and so constructed as to meet various stage requirements.

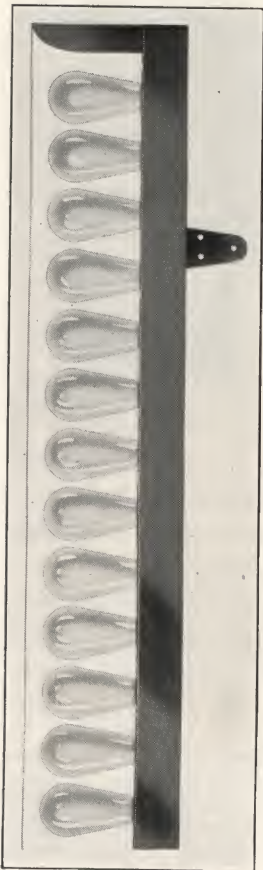


Fig. No. 1233

Fig. No. 1217 Proscenium strip, 15 ft. long, wired for 22 60-watt outlets, one circuit\$35.00

Other lengths on application.

DIPPED OR NATURAL COLOR PROSCENIUM STRIPS

Dipped or Natural Color Proscenium Strip is constructed of galvanized iron having curved reflector with special white reflecting surfaces; wired medium base receptacle in 3 circuits with 3 colors, 16 outlets to each color, 48 outlets in all. Will accommodate up to and including 60-watt lamps; over all length, 16 ft.; splicing box at bottom; arranged with strap hinges for mounting.

They may be mounted on wall in such a manner as to permit angular variation in direction of light. All strips are approved by Underwriters Board.

Fig. No. 1233 16 ft. Dipped or Natural Color Proscenium Strips, wired for 48 outlets, 3 colors.....\$40.00

Fig. No. 1234 8 ft. Dipped or Natural Color Proscenium Strips, wired for 24 outlets, 3 colors.....\$25.00

Lamps extra. Other lengths on application.



Fig. No. 1256

ALUMINIDE COMPARTMENT PROSCENIUM STRIPS

Aluminide Compartment Type Proscenium Strips are constructed of galvanized iron; divided in compartments, each containing an Aluminide reflector and one medium base receptacle; wired on 3 circuits, 3 colors on 7½-in. centers; 6 outlets to each color, 18 outlets in all; fitted with grooves for Color Frames or will take natural color glass medium. Provided with strap hinges for mounting; splicing box at bottom.

All strips are constructed to meet requirements of the New York Board of Fire Underwriters.

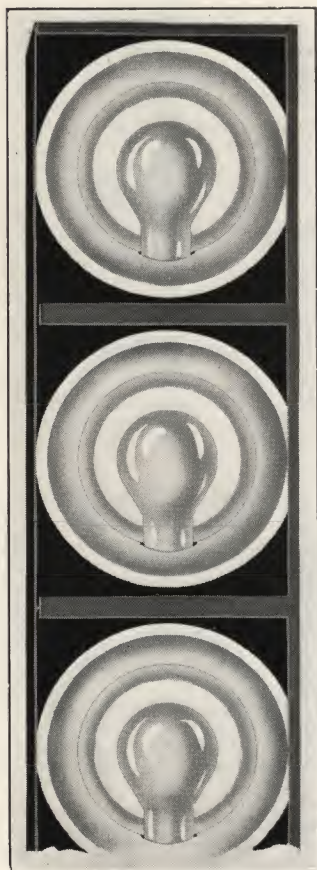


Fig. No. 4610

Fig. No. 4600 Aluminide Compartment Type Proscenium Strip, 15 ft., 6 ins. long, to accommodate 18 150-watt lamps, 3 circuits, Fig. No. 5105, Color Frames\$67.50

Lamps extra.

Other lengths on application.

500 Watt Aluminide Proscenium Strips

Are similar in construction to Fig. No. 4400, illustrated on page 27, but are not furnished with hanging or stand arrangement. Furnished with strap hinges for mounting; splicing box at the bottom.

All strips are constructed to meet requirements of the New York Board of Fire Underwriters.

Fig. No. 4610 Aluminide Compartment Type Proscenium Strip, 500-watt type, wired for 6 receptacles on 3 circuits; sections are 7 ft. long; arranged with grooves for Color Frames Fig. No. 5107; one set Color Frames; 3 25 ft. lengths cable\$66.00

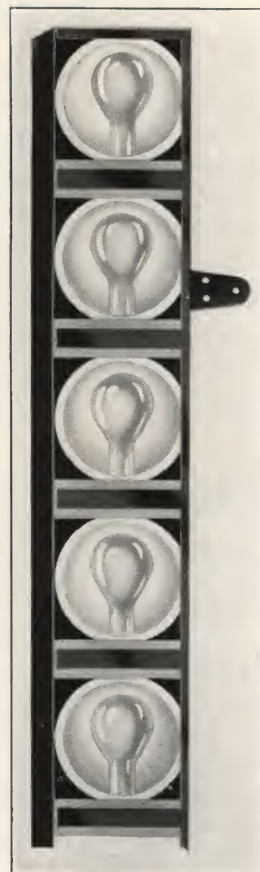


Fig. No. 4600

PROJECTIVE EFFECTS



Assembled Effect

For method of assembly of lenses for showing effects and slides, see page 59.

The Projective Effect is an ingenious apparatus for the projection of moving effects that are really a succession of moving pictures, as for instance, moving clouds, water, flames, smoke, or flying birds. The effect is painted on a mica disc which is rotated in front of a Spot Light by clockwork or a motor. The mica disc is enclosed in a rigid metal case on which is mounted the motor or clock. On the back of the case are grooves fitting into grooves on Condensing Lens Holder, and on front are grooves for attaching Objective Lens. (See photograph on page 59 for assembly of an Effect with lenses.)

Elaborate illusions can be attained by the use of Double Disc Projective Effects, as for instance, flying birds against slow moving clouds, or a panorama with fast moving foreground, background

slow. Elaboration can be carried on indefinitely by using more than one machine. The use of Projective Effects is limited only by the imagination of the producer, and a good rule is always to try attaining an illusion with Projective Effects before building elaborate moving scenery.

Motion picture theatres find Projective Effects invaluable for illusions during overtures and special music programs. Effects can be permanently set and operated from switchboard. For this purpose motor controlled effects are advised. By using Dimmers, Effects can be faded in and out.

Projective Effects are listed both with clockwork and motor control. Clocks of the best quality are used and each one is carefully regulated before shipping.

MOTOR CONTROL FOR PROJECTIVE EFFECTS

Motor control of Projective Effects has been perfected to a practical, dependable mechanism by Display Stage Lighting Co., Inc. After years of experimenting they have been brought to a point of dependability. It is small, simple in construction, easily adjusted for different speeds while Effect is in operation; is noiseless, and will run indefinitely, stopping at any desired place. This last point is very valuable on a Motor Controlled Color Wheel where it is desirable to stop at a certain color.

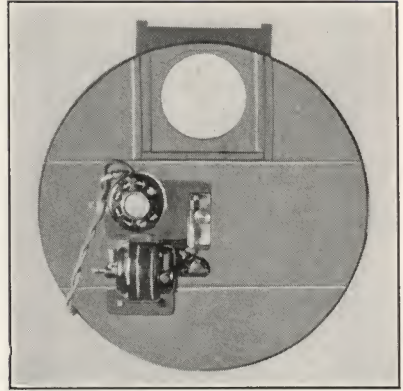


Fig. No. 1302

Motor Control is far superior to clockwork, and very effective for remote control work, being simple in operation and obviating the responsibility of winding, as in the case of clocks.

When desired, Effects can be arranged with a double throw switch so that the motor can be reversed causing the effect to turn in either direction.

The ease of control of motor driven Effects as far as speed and direction are concerned, enables us to show in a more realistic way, storm clouds that come up gradually, increase in speed, and suddenly, because of reversal of wind, change their course to the opposite direction.

Example: Where the action calls for movements in two directions, as in a recent play, a moving forest scene was shown with the heroine apparently running; a moment of indecision, the girl stops, the Effect is stopped, and she turns to the left, the Effect being reversed to suit her movements.

A Variable Speed Motor Controlled Effect Case may also be had without mica discs, as discs are interchangeable and the same case may be used for more than one Effect. However, it is not advisable to make these changes during a performance. Motor Controlled Effect Case is furnished complete with motor driven mechanism and Rheostat. The rheostat for regulating speed of Effect is either mounted on side of case or can be used from a remote point.



Motor controls for operating effects are constructed in three different speeds covering the needs required by the various effects. When ordering Motor Controlled Effect Cases, state what Effects they are to be used for.

Fig. No. 1353 Single disc, slow speed motor effect case, ranging from approximately ten to twenty minutes per revolution.

Fig. No. 1354 Single disc, medium speed motor effect case, ranging from approximately one and a half to two and a half minutes per revolution.

Fig. No. 1355 Single disc, fast speed motor effect case, ranging from approximately ten to twenty seconds per revolution.

Fig. No. 1356 Double disc, slow speed motor effect case, ranging from approximately ten to twenty minutes per revolution.

Fig. No. 1357 Double disc, medium speed motor effect case, ranging from approximately one and a half to two and a half minutes per revolution.

Fig. No. 1358 Double disc, fast speed motor effect case, ranging from approximately ten to twenty seconds per revolution.

Prices on application.

CLOCK OPERATED EFFECT CASES

Fig. No. 1359 Single disc, slow speed clockwork effect case, ranging from approximately ten to twenty minutes per revolution.

Fig. No. 1360 Single disc, medium speed clockwork effect case, ranging from approximately one and a half to two and a half minutes per revolution.

Fig. No. 1361 Single disc, fast speed clockwork effect case, ranging from approximately ten to twenty seconds per revolution.

Fig. No. 1362 Double disc, slow speed clockwork effect case, ranging from approximately ten to twenty minutes per revolution.

Fig. No. 1363 Double disc, medium speed clockwork effect case, ranging from approximately one and a half to two and a half minutes per revolution.

Fig. No. 1364 Double disc, fast speed clockwork effect case, ranging from approximately ten to twenty seconds per revolution.

Prices on application.

LENSES FOR PROJECTIVE EFFECTS

An Objective Lens and a Condensing Lens in Holder are necessary for the operation of a Projective Effect. See photograph on page 59 for assembly of an Effect with Lenses. Price of Objective Lens, page 59. Condensing Lens and Holder, page 59.



FRATERNAL EFFECTS

Illusionary Effects for the various degree and initiation work, and illuminated designs correct in every detail, can be furnished for Fraternal Orders. Our wide experience in devising Effects enables us to add the touch of ingenuity, beauty and smoothness of operation that makes the work a finished performance. Prices on request.

LIST OF PROJECTIVE EFFECTS

The following list comprises the Effects in most general use, and which can be furnished on short notice. The list, however, does not limit the number of Effects that can be designed and produced to meet the requirements of any production.

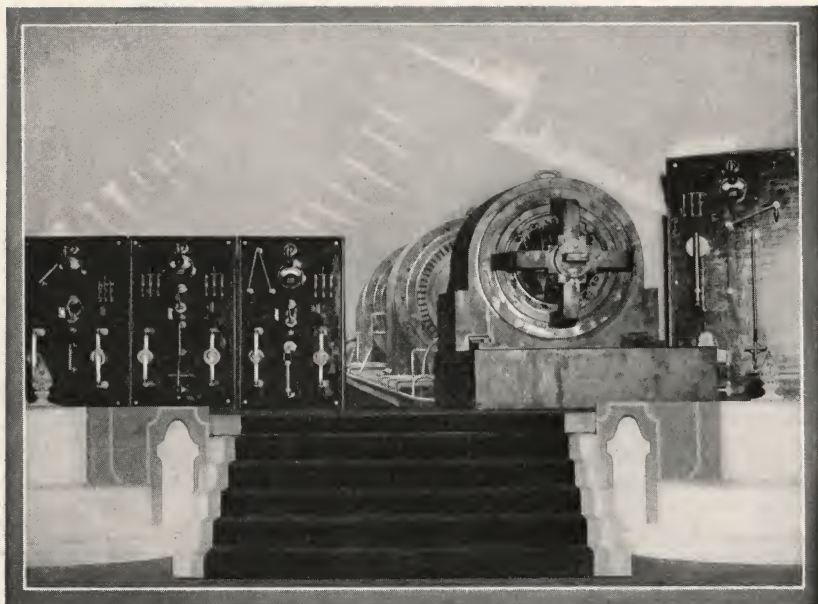
All Effects are artistically hand-painted in full color, mounted in staunch metal case with clockwork or motor attached. Slides are painted on glass or mica, $3\frac{3}{4}$ ins. by 4 ins., and fit into metal slide holder (see page 59) accommodating two slides. Effect discs may be purchased without case.

Prices on specially designed projective Effects will be quoted on request.

Fig. No.	Price
1400 Aeroplane Slide, used with Moving Cloud Effect.....	\$ 8.00
1401 American Flag Waving, slide with Moving Disc, clockwork.....	35.00
1402 American Flag, slide only, hand painted.....	8.00
1403 Aurora Borealis, 4 slides, color wheel and clockwork for Objectives....	52.00
1404 Aurora Borealis Rays, double disc.....	72.00
1405 Aurora Borealis Rays, double disc, hand movement.....	52.00
1410 Blizzard Effect, single disc with slide operated by clock.....	77.50
1417 Chinese Snow, a fantastical colored effect with squirming tails.....	72.00
1418 Cyclone Effect with flying objects, single disc.....	85.00
1423 Dissolving Color Wheel, a fanciful movement of colors in various designs giving a perfect blend of various colors.....	35.00
1428 Falling American Flags, single disc.....	115.00
1429 Falling Flower Effect, single disc.....	115.00
1430 Falling Leaves, single disc.....	92.00
1431 Falling Roses, single disc.....	115.00
1432 Fireworks Effect, bursting shells with falling colored stars.....	72.00
1433 Fireworks, ascending rockets showing a trail of fire, to be used in conjunction with bursting shells, operated on two machines.....	62.50
1434 Fire Effect, single disc.....	72.50
1435 Fire and Smoke Effect, double disc.....	115.00
1436 Flying Angels, single disc.....	115.00
1437 Flying Birds, single disc.....	115.00
1438 Flying Butterflies, glass disc.....	115.00
1439 Flying Butterflies, mica disc.....	145.00
1440 Fog Effect, mica disc.....	67.00
1441 Fog Effect, mica disc with slides, 2 clockworks.....	117.00
1442 Forest Fire, Panorama, single disc.....	85.00
1443 Forest Fire, Panorama, double disc.....	120.00
1450 Inferno Effect, double disc.....	115.00
1457 Lava Effect with mountain slide.....	72.00
1458 Lightning, Zigzag, slide cut in brass, various designs.....	27.00
1459 Lightning, Zigzag, slide between clouds.....	27.00



Fig. No.		Price
1464	Midnight Sun with scintillating rays.....	\$ 72.00
1465	Moonlight Ripple Effect.....	58.00
1466	Moving Clouds, with flying aeroplanes or birds, double disc.....	115.00
1467	Moving Clouds, with rising or setting moon appearing.....	85.00
1468	Moving Clouds, with rising or setting sun.....	85.00
1469	Moving Clouds with stationary moon.....	77.00
1470	Moving Fleecy Clouds.....	80.00
1471	Moving Heavenly Clouds, double disc.....	115.00
1472	Moving Storm Clouds.....	72.50
1473	Moving Sunset Clouds.....	80.00
1474	Moving Clouds and moving water, double disc, clockworks.....	115.00
1475	Moving Clouds and flowing water and moving ship or aeroplane, single disc, clouds and water operated by clock, aeroplane or ship, by hand.....	125.00
1480	Niagara Falls Effect, disc and slide.....	85.00
1485	Ocean Ripple.....	62.50
1486	Ocean Waves.....	72.50
1487	Ocean Waves with Panorama shore line or moving ships, double disc.....	125.00
1492	Panorama Slide, hand painted, any subject, any length, hand or clock movements.....	Price on application
1493	Panorama, Moving, single disc, any subject.....	88.00
1494	Panorama, Moving, double disc, any subject operating on different speeds.....	115.00
1495	Panorama, Moving Forest.....	135.00
1496	Panorama, Moving Freight Cars.....	135.00
1497	Panorama, Moving Winter Scene.....	125.00
1499	Rain Effect.....	77.00
1500	Rain of Ashes.....	72.00
1501	Rain of Fire.....	72.00
1502	Rainbow Prism Effect, consisting of two imported prisms arranged in housing to suspend in front of objective, with metal cutout.....	Price on application.
1503	Rainbow Slide painted on glass.....	5.50
1504	Rising Mist, mica slides.....	58.00
1505	Rising or Setting Moon.....	32.00
1506	Rising or Setting Moon with Stationary Clouds.....	92.00
1507	Rising or Setting Sun.....	32.00
1508	Rising or Setting Sun with Stationary Clouds.....	92.00
1509	Running Water.....	72.50
1510	River of Souls Effect.....	Price on application.
1514	Sand Storm Effect, single disc.....	72.50
1515	Sand Storm Effect, double disc.....	92.50
1516	Shooting Comet, hand movement.....	7.50
1517	Slides—special, hand-painted to specifications.....	Price on application
1518	Smoke Effect, single disc.....	72.50
1519	Smoke Effect, double disc.....	105.00
1520	Snow Effect.....	67.00
1521	Snow Storm, two effects.....	135.00
1522	Star Falling, hand movement.....	7.50
1523	Star Shooting, hand movement.....	7.50
1524	Stars, slide showing field of stars.....	7.50
1525	Stars Twinkling, hand movement.....	7.50
1526	Surf Effect, fine waves, glass prism slides.....	62.00
1527	Surf Effect, rough waves, glass prism slides.....	62.00
1528	Swimming Fish Effect, single disc.....	72.50
1529	Swimming Fish Effect with flowing water, double disc.....	105.00
1534	Tidal Wave, two effects.....	150.00
1535	Twinkling Moon Effect, comical.....	18.50
1540	Volcano Eruption, single disc.....	72.50
1545	Waterfall Effect, single disc with slide.....	72.50
1546	Water Ripple.....	58.00



Wireless Station. An animated scene, switchboards lighted, effect of motors running, wireless flashing and crackling, with all accompanying sounds.

ELECTRO-MECHANICAL EFFECTS

Electro-Mechanical Effects include all electrically operated properties, either lighted or moving for illusionary effect, and various mechanical sound-making apparatus.

Listed are a few of the most often used Effects, which can be quickly produced on order. This list, however, does not limit the number of Effects which we are equipped to furnish. We are constantly designing a great variety of Effects for Broadway successes, and it is quite likely that our files contain the solution of your problem; or we will design an Effect to meet your need.

AUTOMATIC LIGHTNING

An apparatus for making lightning flashes by the operation of a switch. A magnetic make-and-break controls an arc, making a rapid succession of brilliant flashes when switch is thrown in. Automatic Lightning can be had either in a screen enclosed box which allows the flashes to light up the whole stage, or in a Standard Spot Light Hood for concentrating flashes on a chosen point. When used in this way, Automatic Lightning is often hung in border or set in wings, controlled from the stage, and concentrated on an object to be struck. A zig-zag or forked Lightning Slide is used, and Objective and Condensing Lenses are then necessary.



Fig. No. 1550

- Fig. No. 1550 Automatic Lightning, screen enclosed, arranged for stand or clamp hanger\$24.00
- Fig. No. 1551 Automatic Lightning, screen enclosed, rheostat, switch, crowfoot base stand, 25 ft. No. 10 stage cable, and connector.....\$36.00
- Fig. No. 1552 Automatic Lightning, mounted in Spot Light Hood, telescoping stand, switch and rheostat, 25 ft. No. 10 stage cable, and connector.....\$64.50
- Fig. No. 1553 Automatic Lightning, mounted in Spot Light Hood, switch and rheostat, adjustable pipe clamp for hanging, Lightning Slide with objective and condensing lenses, 60 ft. No. 10 stage cable, and connector.....\$95.00

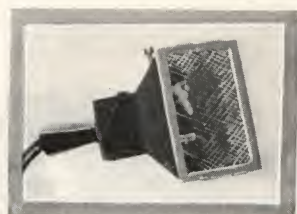


Fig. No. 1580

HAND LIGHTNING STRIKER

A portable apparatus held in the hand and operated by a push button which makes the arc contact. A simple and effective method of producing lightning flashes. A protective screen encloses the arc.

- Fig. No. 1580 Hand Lightning Striker, 6 ft. No. 10 stage cable.....\$8.50
- Fig. No. 1581 Hand Lightning Striker, rheostat and switch, crowfoot base stand, 25 ft. No. 10 stage cable, and connector.....\$20.50

SMOKE EFFECT

An apparatus for producing chemical smoke. A hand pump maintains pressure in 10-gallon steel pressure tank. Opening of valve on tube leading from tank to chemical jars forces air through chemicals, producing an odorless smoke which may be directed where desired through outlet tube. Can be used with absolute safety anywhere. Pump and pressure tank are mounted on heavy wood base; chemical jars are mounted in convenient portable rack which fits into wood traveling case.



Fig. No. 1700

- Fig. No. 1700 Smoke Effect, complete as described.....\$45.00



Fig. No. 1755

FLAMING TORCH. A hollow, metal torch shaped with a flare at the top to represent a medieval or ancient torch, has flames of silk on wire frame. Miniature incandescent lamp hidden in torch lights the silk and gives appearance of bright flames. Battery and switch for controlling lamp contained in handle. Flaming Torches of any design or period can be furnished to specifications.

- Fig. No. 1755 Flaming Torch as described.....\$10.00
 Fig. No. 1625 Door Bell, mounted on board with batteries and pushbutton 5.00
 Fig. No. 1675 Electric Garlands or Streamers..To specifications
 Fig. No. 1645 Electric Flash Box. Slate with binding posts. Hollow between posts for flash powder. Enclosed in metal box with hinged cover. 18 ins. of asbestos wire..... 7.00
 Fig. No. 1646 Flash powder, 2 ozs..... 3.00

Electrical Musical Bells are used effectively as curtain raisers in theatres, in restaurants, cafes, hotels, and in groups for musical productions, etc. Made of the best possible combinations of metals, and perfect in tune, tone and pitch. The electric striker is padded to produce a pure musical tone superior to the gong-shaped bell and has the advantage of chord combinations which harmonize perfectly. They can be placed in any part of the building, separately or collectively.

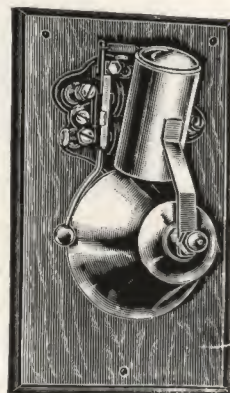


Fig. No. 1647
Electric Staff Bell
with Resonator

Electric Gong Bells are also tuned to any pitch desired and can be operated from three ordinary dry cells.

- Fig. No. 1647 Electric Staff Bells with resonator, single bell...\$11.50
 Fig. No. 1648 Electric Gong Bells with resonator, single bell... 10.00
 Fig. No. 1649 25-Note Keyboard to operate bells..... 55.00
 Fig. No. 1635 Flickering Stars, set of 12, hand operated keyboard. 20.00
 Fig. No. 1636 Flickering Stars, set of 24, hand operated keyboard. 32.00
 Fig. No. 1637 Flickering Stars, set of 12, motor operated keyboard. 52.00
 Fig. No. 1638 Flickering Stars, set of 24, motor operated keyboard. 64.00
 Fig. No. 1685 Moon Box, 14-in. opening, cable extra..... 12.00
 Other sizes on application.
 Fig. No. 1686 Rising Moon with windlass, state diameter of moon and range of operation.....Price on application

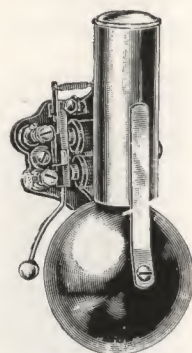


Fig. No. 1648
Electric Gong Bells
with Resonator

Fig. No. 1630	Electric Smoke Box for generating smoke, consisting of heating element, enclosed in metal box with hinged protective cover, 18-in. asbestos leads.....	\$19.00
Fig. No. 1631	Chemical Smoke Powder to be used with Electric Smoke Box...On application	
Fig. No. 1655	Fireflies, set of 12, with hand operated keyboard.....	\$20.00
Fig. No. 1656	Fireflies, set of 24, with hand operated keyboard.....	32.00
Fig. No. 1657	Fireflies, set of 12, with motor operated keyboard.....	52.00
Fig. No. 1658	Fireflies, set of 24, with motor operated keyboard.....	64.00
Fig. No. 1639	Firefly wire, dark blue, very thin and flexible.....	On application
Fig. No. 1640	Firefly wire, black, very thin and flexible.....	On application
Fig. No. 1641	Firefly lamps with 24 ins. cord and miniature plug.....	\$5.50
Fig. No. 1642	Firefly lamps without base, having two copper terminals.....	.25
Fig. No. 1765	Noise of Wind, motor operated, universal motor.....	\$75.00
Fig. No. 1760	Noise of Wind, hand operated.....	35.00
Fig. No. 1600	Sound of Aeroplane.....	On application
Fig. No. 1604	Sound of Automobile; 25 ft. No. 14 stage cable.....	\$75.00

SOUND OF AUTOMOBILE

Raising of cover increases volume of sound, producing the effect of automobile approaching. It can also be used with dimmer for the same purpose. Cutting down with dimmer gives the effect of a motor boat.

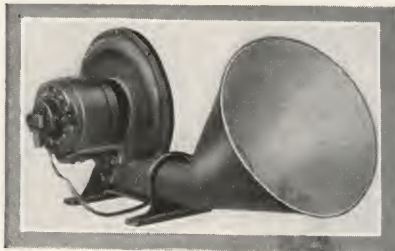


Fig. No. 1765

Fig. No. 1737 Star Box. Socket and short lead of wire\$2.00

Metal Box approximately 3 ins. by 4 ins. by 1½ ins. deep. Crystal bead set back of opening, arranged with two pins for suspending back of drop.

Fig. No. 1740 Sun Box, 24-inch diameter opening, cable extra\$20.00
Other sizes on application.

Fig. No. 1741 Sun Box arranged with windlass, state diameter of sun and range of operation.
Price on application

Fig. No. 1770 Wireless and radio effects.
To specifications.

T E L E P H O N E S

Fig. No. 1745 Desk Telephone, black or nickel plated, \$9.00

Fig. No. 1746 Desk Telephone, with light in mouthpiece, switch control..... 12.00

Fig. No. 1747 Old Fashioned Wall Telephone, with magneto ring..... 25.00

Fig. No. 1748 Telephone Bell Box, with battery, 35 ft. wire and push button..... 7.50

Fig. No. 1749 Telephone with light in mouthpiece, which lights when receiver is lifted from hook. 12.00

Fig. No. 1750 Field Telephone, combined receiver and transmitter 8.50

Fig. No. 1751 Continental Telephone, black and silver 30.00



Fig. No. 1760

REVOLVING MIRRORED EFFECTS

A hollow form constructed of sheet copper, the entire surface of which is covered with pieces of mirror, is suspended from the ceiling and slowly revolved by a concealed motor. Spot lights from various points projecting concentrated light thereon, reflect thousands of moving rays of light.

When color mediums or color wheel is used on spot lights, the dancing rays of colored light give a weirdly beautiful effect either for the stage or ball room. Best results are obtained when room is dark.

A small variable rheostat is furnished and can be installed at a convenient point for regulating speed.

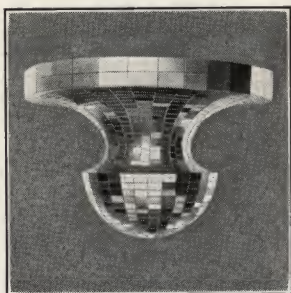


Fig. No. 1620 Revolving Shower, 36 ins. in diameter, 27 ins. high, complete with universal motor, arranged for hanging, rheostat and full connector\$250.00

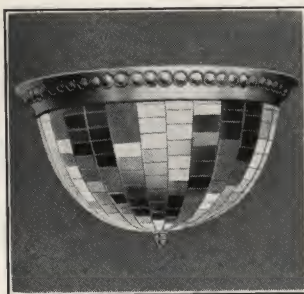
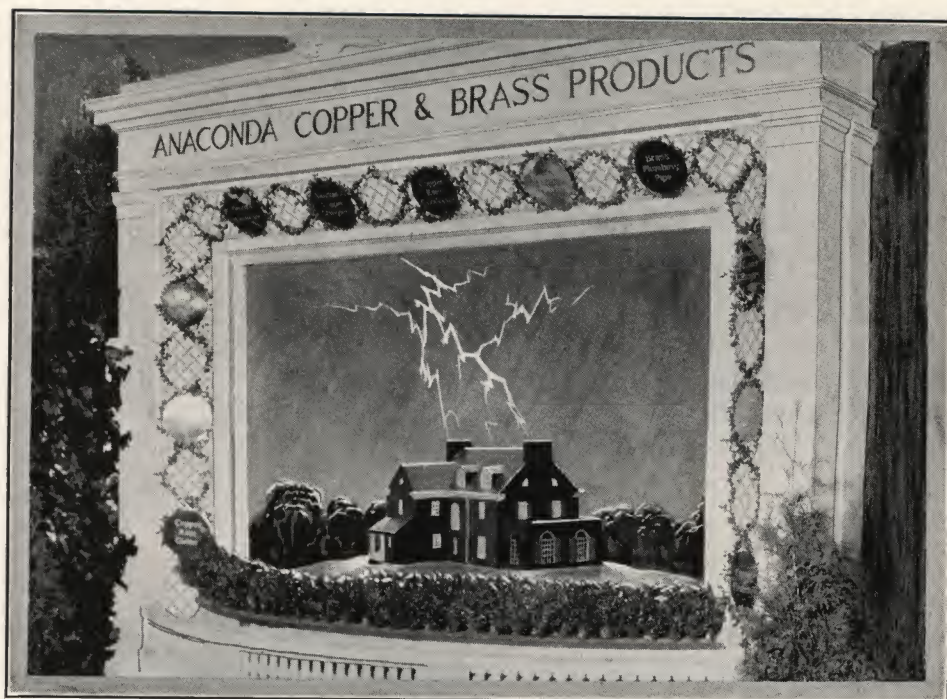


Fig. No. 1616 Half Mirror Ball, 18 ins. in diameter, complete with universal motor arranged for hanging, rheostat and full connector\$125.00



Fig. No. 1615 Revolving Mirror Ball, 18 ins. in diameter, complete with universal motor, arranged for hanging, rheostat and full connector\$250.00

On Receipt of Information as to the size of room, conditions, where revolving shower is to be used, height of ceiling, etc., we shall be glad to recommend the proper type spot lights to obtain the best results.



DIRECT ADVERTISING EFFECTS

An example of the direct advertising is the exhibit designed and constructed for the Anaconda Copper Company which graphically shows the use and advantages of copper shingles in a compelling way.

A model of a country home of fine Colonial architecture was realistically set with lawns, shrubbery and a scenic cyclorama of distant trees and sky in shadow box 7 feet wide, 4 feet deep, 5 feet high. The lighting was arranged to gradually pass through the cycle of a day and a night every three minutes, smoothly blending from a pale dawn to full noon-day sun which in turn faded out through a glowing sunset into twilight and moonlight. In the middle of the night a storm came up, clouds rolled across the sky, lightning flashed and struck the house, wind whistled, and then rain. The storm gradually passed, moonlight appearing again only to fade into another dawn.

The whole effect was startlingly real and constantly drew a crowd which watched in amazement, unable to discover the source of light or how it was all done. The apparatus was entirely concealed in the two foot space above the proscenium, operated by a Motor Driven Multiple Effect Control and required no attention while operating.



Countless Effects even more intricate than this one can be devised for use in window displays and exhibits and arranged to tell a story and show action that is both realistic and effective. Color has tremendous attention drawing power, and colored light is much richer than painted color. To color add motion, or change of color, and the effect is multiplied many times.

With Multiple Effect Control, any lighting units,—Projective Effects, Electro-Mechanical Effects, Color Wheels can be automatically operated as desired, and can be easily concealed in small space.

Sketches and estimates will be furnished for producing any Effect, and wherever possible a lighting expert will call and make a thorough study of the problem if desired.

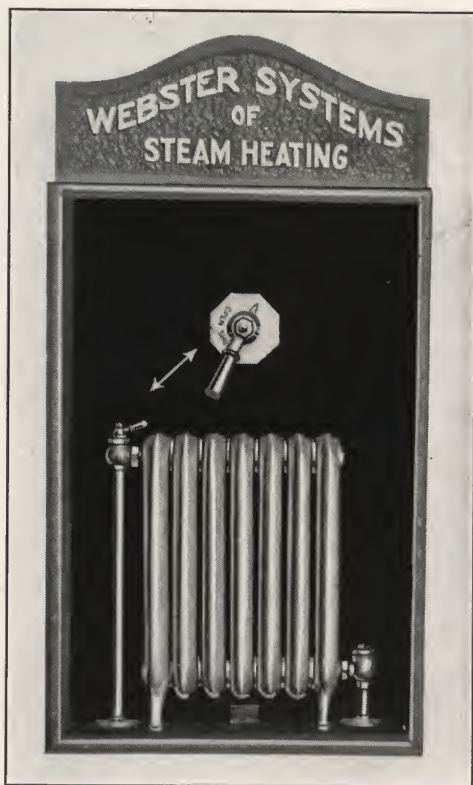
Note:—The Multiple Effect Control for producing this type of Effect is original and covered by applications for patents.

The following is one of the many novel display effects designed and constructed by us:

A shadow box 4 ft. high, 2 ft. 6 ins. wide, 14 ins. deep, lined with black velvet containing a reproduction of a standard radiator which appeared to be of solid iron when not illuminated.

The radiator was connected with standard fittings as if in use, a reproduction in heroic size of the Webster Type "W" Modulation Valve was mounted above the radiator. This was synchronized with the valve on radiator and with a shutter in back of controlling lights, the whole operated by a small universal motor mounted in back of box.

In operation the valve on radiator and the valve above turned together, stopping at each point. Shutter controlling lights opened a point at a time, gradually illuminating radiator which was transparent, with a warm glow. This continued until entire radiator was radiant, then the action was reversed, shutting off heat Effect and radiator became cold.





THE LATEST, NEWEST AND ONLY PRESET- AUTOMATIC SWITCH AND DIMMER CONTROL

“More Than Human in Its Possibilities”

After deciding on your presentation and setting the machine adjustment it carries the program on alone . . . unaided . . . unwatched. It blends colors . . . changes scenes . . . holds desired effects . . . with no limit to its repertoire . . . and no need of repetition.

You can create the complete cycle of a day, from dawn to night. Early morning before daylight, a sun creeping above the horizon flooding the scene with its fresh morning radiance, the rays and warmth of a noon-day sun, the rumble of thunder warning of the approaching storm, dense clouds moving across the heavens, flashes of lightning, rain beating down in torrents . . . the storm subsides . . . and then—a delicate rainbow, a gorgeous sunset passing gradually into evening with its soft fleecy clouds; night, flickering fireflies, mellow moon, twinkling stars, all with a single adjustment.

The “light plot” described in the above cycle is only one of the countless themes accomplished with this mechanical innovation.

Scenes are created by this machine requiring timing beyond the accomplishment of human fingers. Light, the basis of all art creations, is controlled so that the full effect of shimmering brilliance and the tender softness of a fading ray can be realized. There is no limit to the control possibilities of this machine and the effects such control produces.



THE LAST WORD IN BATHING BEAUTIES

(Through courtesy of Light Magazine)

Bathing beauties, here, there and everywhere—especially those aspiring to the title of Miss America—might project an interested, if not respectful, eye in the direction of Captain Young's latest pride and joy at Atlantic City.

After the custom of bathing beauties in general, Captain Young's b. b. came not by her bathing appellation from any particular fondness of the water. Nevertheless, she bathes—bathes every night between dusk and midnight, if you please, in a flood of ever-changing rainbow hues. This for the benefit of all who promenade along the famous Boardwalk. "She," before we carry this thing just a little too far, is a house—Captain Young's—No. 1 Atlantic Ocean, far out on the Million Dollar Pier. It holds the distinction of being the first flood-lighted "job" wherein dimmers are used to permit the gradual blending of colors from one to another.

Thirty 1000-watt G. E. projectors pour a rich flood of light of slowly changing colors upon this pretentious home from two different points. Eighteen units (eight of which are blue, five red, and five amber) operate



at a point some 75 feet from the house. Twelve units are at the pier edge only 15 feet out from the side walls. Four of these are blue, four red, and four amber. Matt finished aluminum reflectors were used here because the new stippled colored lenses were not available at the time of installation.

“As for the dimming,” says Mr. William Price of The Display Stage Lighting Company, who made the installation for the home of Captain Young at the Million Dollar Pier, “six 6000-watt dimmer plates are so actuated by motor-driven cams as to cause a gradual blending from one color into another through the entire cycle of changes, which requires 80 seconds. The dimmer mechanism is a versatile affair. It is possible to disconnect the cams and play any other desired sequence or combination of colors.”

Yes, Captain Young’s home is again the talk of the Boardwalk—a beauty quite in a class by itself.

ARCHITECTURAL AND ALLIED ARTS EXPOSITION

February 21 to March 5, 1927

In a modern Italian setting, is seen an arched doorway with a balcony beyond overlooking a fountain with shrubbery. On the light blue cyclorama which backs this, is gradually seen the approach of day, the coming up into the full light of day and the gradual dimming to evening with the coming of a storm, storm clouds and lightning, then torrents of rain, and the cessation thereof to be followed by a rainbow. Then lights up full to another day, a fair day with fleecy clouds in the sky, evening with its myriad stars and moon, then storm clouds with falling snow and a winter panorama viewed as from a train window, the foreground moving faster than the background, and a quick transition to a summer woods viewed from a train as well.

The cycle required five minutes which could be controlled at any point to double the time.



The reception room from which this was viewed was flanked by tall columns supporting a beautifully painted stained glass ceiling behind which the light changed continually. To the right in the huge fireplace, a burning log threw vari-colored light on the ashes and background. To the left was seen a display of A B C signs which showed the possibilities of silk in place of glass or other material in the sign of today.

This was controlled by one bank of automatic dimmers and switch-board which, when thrown on, ran without attention.

First Automatic Preset Switch and Dimmer Control used with marvelous success at one of United States' leading department stores

L. Bamberger & Co., of Newark, for Christmas, 1926, installed "Bunnyland," a feature attraction on the Toy Floor. The child presented his ticket at the door and entered the cave, passing various scenes and effects enroute to the castle. These effects changed continuously as well as the general lighting which passed through a cycle of colors every two minutes. Such effects as falling flowers, flying butterflies, characters from tales of Fairyland, clouds, stars, a Santa Claus on a crescent moon, were shown and deterred the little traveler on his way. Arriving at the Castle, he was met by Mr. Bunny (Santa Claus) and presented with a prize package. This by-play was viewed by an audience through a diminishing glass which showed the children and Mr. Bunny in miniature. The children then passed out of the Castle along another path, viewing other scenes and effects. This entire display effect was planned and executed by us.

A bank of automatic dimmers operated all the lighting and effects in "Bunnyland."

DISPLAY ELECTRIC FOUNTAINS

Portable Display Electric Fountains, flowing real water and lighted by concealed colored lights if desired, add a touch of beauty and animation to any decorative effect. As they are independent of outside water supply, the water being contained in the basin of the fountain and circulated by an electric pump, they are suitable for use in any place,—the theatre, store decoration, window display, or in the home.

As each water jet used in these fountains may be individually controlled both in force and direction of stream, a great variety of effects can be attained. The height and volume of water are controlled by a valve in base of fountain. Colored lights may be used and a motor driven arrangement installed for changing and blending the colors. Wonderful color effects can be obtained by the use of spot lights and motor driven color wheels trained on fountains.

The designs shown are some that we have constructed, but a limitless variety of designs can be produced to fit individual needs. As all fountains are built to order, prices will be given on request. In ordering state the current lighting desired, if any, finish and size. Fountains are furnished completely wired, with feed cable.

PALACE GARDEN FOUNTAIN

This Fountain has a 20" diameter copper bowl colored in beautiful verde green. The basin is 14 in. high, has two small lights concealed to illuminate a picturesque hand-painted crystal dome and also the sparkling water effect. The stand is made of wrought iron and is 34" high. The splash ring is 24" wide, constructed of a beautiful leaded art glass. The Fountain can be removed and placed on a table.



Figure 1652



Fig. No. 1651

ORNAMENTED BASIN FOUNTAIN

Figure 1651

A beautifully ornamented basin 4 ft. 6 ins. diameter by 2 ft. 6 ins. high has a row of individually controlled jets around inner rim of basin from which water rises to a point above as desired.

Pump and alternating or direct current motor are contained in base of fountain.

Constructed of sheet metal, finished in antique bronze, marble, or as desired; mounted on casters.

DOLPHIN BOY FOUNTAIN

Figure 1650

A figure of a boy with a dolphin stands on a pedestal in the center of a basin. Water from jets in rim of basin rises above head of boy, and from jets on edge of pedestal splashes around him. From the flower rising behind, it splashes over his head, while a stream flows from the dolphin's mouth.

Constructed throughout of sheet metal, elaborately ornamented, and finished in antique bronze, marble, or as desired. Diameter of basin, 6 ft. Pump and alternating or direct current motor are hidden under the basin, making the fountain a self-contained unit. Mounted on casters.



Fig. No. 1650

WALL FOUNT

Figure 1653

Wall Fount 26 ins. by 36 ins. attaches flat against or may be set into wall. Constructed of sheet metal, richly ornamented with figures of a dolphin and Neptune's horses. Water flows from the mouths of the figures and from points in the ornament, causing a flow over the ledge into a shell shaped basin below.

Pump and alternating or direct current motor are a separate unit which may be located on other side of wall or beneath fountain. This unit may be provided with drain and attached to city water supply. Can be furnished with concealed lighting if desired.



Fig. No. 1653

WATERTIGHT LIGHTING UNIT



Fig. No. 800

This unit is designed for use under water to illuminate objects, water itself, or water sprays. It is made of bronze, waterproof throughout and contains an Aluminide Reflector equipped to take up to a 100-watt lamp. It is swung in a yoke, mounted on base, and furnished with waterproof cable and stuffing box. A lens is mounted in the head and a roundel may be used back of the lens for color.

Fig. No. 800 Watertight Lighting Unit, complete with 10-ft. superservice cable..... **18.00**

BURNING LOGS FOR THE OPEN FIRESIDE



Fig. No. 4700
BURNING LOGS
(Patents Pending)

Eons ago, man kindled the first wood fire and dreamed the future of the race in the dancing flames. Coming down through the countless ages, the same mystic allurements still holds us—elfin shapes in the glowing embers, the rise and ebb of moving flames painting visions of ever-changing beauty on the background of softly flickering glow.

With utmost realism, these effects are all reproduced in our electric fire logs. Flickering logs that almost have the odor of burning wood. Fashioned by experienced hands skilled in the fine art of producing illusionary effects, each log has a distinct individuality.

So close is the imitation of nature that they will bear the inspection given them in window displays, exhibits, or in apartments and public buildings where the fireplace is more ornamental than useful.

They are constructed of paper maché, carefully and artistically modelled. The mechanism for reproducing the fire effect is simple in construction and operated by a small slow running motor furnished with rheostat for regulating.

While many varieties are carried in stock, we can build them to conform to a particular fireplace. They can be made for any shape opening from two to more than six feet in width, and either shallow or deep.

In ordering, specify height, width, and depth of fireplace opening, and dimensions of andirons. The motor operates on direct or alternating current.

BURNING LOGS

A six-foot log glowing richly in a bed of restless embers. Bright flames shoot upward and cast strangely moving shapes on the background. A triumph in realism. Completely assembled, ready to install and attach to lamp socket or wall pocket. As the mechanism for the operation of this log is contained in the ash heap, it will improve appearance to sink the mechanism below hearth level.



Fig. No. 4702



Fig. No. 4701

Two brightly glowing logs, one burned through and resting in a heap of glowing embers and smoldering ashes. Dancing, ever-changing flames leap upward to the chimney. The burning ends form moving patterns of glowing fire. Ready to install and connect to an ordinary lamp socket or wall pocket. This beautiful effect is complete.

FIRE LOGS

Fig. No. 4730	Assembly of two logs with heap of ashes and glowing embers, 24 to 30 ins.	\$125.00
Fig. No. 4731	Three logs, 24 to 30 ins.	150.00
Fig. No. 4732	Assembly of three to four small logs, 36 to 40 ins.	175.00
Fig. No. 4733	One large log burned in two with heap of ashes and glowing embers, 48 to 60 ins.	200.00
Fig. No. 4734	Assembly of one large log partly burned, one large log burned through and falling heap of ashes with glowing embers, 48 to 60 ins.	225.00
Special logs to specifications, any assembly, to fit own fireplace.		
(Without Ash Heap)		
Fig. No. 4740	Assembly of two logs, 24 to 30 ins.	\$110.00
Fig. No. 4741	Assembly of three logs, 24 to 30 ins.	135.00
Fig. No. 4742	Assembly of three to four small logs, 36 to 40 ins.	160.00
Fig. No. 4743	One large log burned in two, 48 to 60 ins.	185.00
Fig. No. 4744	Assembly of one large log partly burned, one large log burned through, 48 to 60 ins.	210.00

ILLUMINATED FIRE LOGS AND GRATES FOR STAGE USE



Fig. No. 1775

Fig. No. 1780

Illuminated logs, while similar in construction to the foregoing, do not contain the animated effect, but are wired two or more receptacles for colored lights which burn with a steady glow.

Are made in various sizes and groupings for fireplace and camp fires. The logs are of hollow construction, asbestos and translucent material, modeled and artistically painted to represent the log with bark on and cut ends, glowing in the middle and with charred ends. The lights are concealed within, and when illuminated, give the appearance of actually burning.



Fig. No. 1782

Fig. No. 1775 Fire Logs (without andirons); with ash heap; 18 ins. long, 12 ins. high, 12 ins. deep; 25 ft. No. 14 Stage Cable.....\$35.00

Fig. No. 1776 Same as above; 24 ins. by 14 ins. by 16 ins..... 45.00

Fig. No. 1780 Camp Fire, 18 ins. high, 14 ins. wide; 25 ft. No. 14 Stage Cable..... 45.00

Fig. No. 1781 Same as above; 24 ins. by 22 ins.; 25 ft. No. 14 Stage Cable..... 65.00

Fig. No. 1782 Burning Logs, 12 ins. by 18 ins.; 25 ft. No. 14 Stage Cable..... 35.00

FLAME EFFECT FOR OPEN FIRES

A realistic effect of flames coming from between the Logs or Coals is produced by a fan driven arrangement of flame-colored streamers. Gives the appearance of a briskly burning fire. Price on request.

COAL GRATE. A grate or basket of cast iron contains a bed of "live" coals interspersed with black coals. Hollow construction of the bed of coals allows the concealing of electric bulbs which, when illuminated, give a softly glowing effect as in a real grate.

Fig. No. 1790 Coal Grate\$25.00



Fig. No. 1790

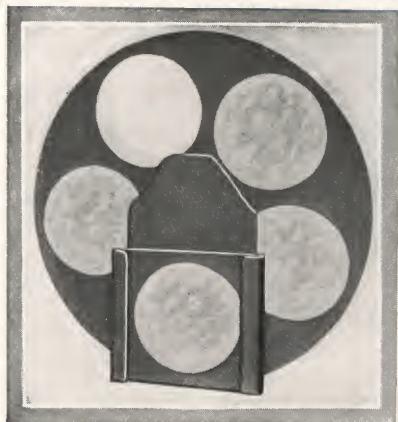


Fig. No. 1795

COLOR AND COLOR EFFECTS

The coloring of light in the theatre is accomplished both by the use of colored lamps and by the use of Gelatine sheets in Color Frames, Color Wheels, and Color Boxes. Grooves are provided on all Spot Lights, Flood Lights, Border Lights, etc., to accommodate color apparatus. Lamps are colored by dipping in a solution of Colorine. (See page 57.)

COLOR WHEEL is a rigidly constructed wheel of galvanized iron, with 5 or 6 openings for sheets of colored gelatine. It is used on Spot Lights for changing the color of the light projected. Any desired combination of colors can be furnished.

Fig. No. 1795 Color Wheel, 5 openings.....\$5.00
Fig. No. 1796 Color Wheel, 6 openings..... 6.50

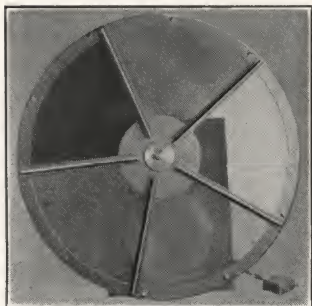


Fig. No. 1803

AUTOMATIC COLOR WHEEL

The motor driven color wheel is gradually superseding all other styles because of its flexibility. Equipped with a small rheostat which regulates the speed of the wheel and operated by a switch located at a distant point, this can be controlled at will, made to stop at a desired color, or continue at high or low speed.

Color wheels have five openings, and are equipped with Universal Motor for 110-120 volt current, mounted on frame which fits into standard 6-in. spot light color grooves.

Fig. No. 1803 Automatic Color Wheel, motor control.\$55.00

DISSOLVING COLOR WHEEL gives the effect of one color slowly dissolving or melting into another with changes so gradual that the wheel passes through all colors without a perceptible break. Slides of grained glass used with the Dissolving Color Wheel throw the color in strange shapes, constantly changing waves and forms, that give an air of unreality to any scene they are thrown over. The effect is one of the most unusual and unexplainable ever devised. Dissolving Color Wheel is operated by clockwork and used with Condensing and Objective Lenses, Slide Holder and Carrier.

Fig. No. 1423 Dissolving Color Wheel with clockwork, 4 assorted glass designs (Lenses and Holder and Carrier extra)\$35.00

Fig. No. 1424 Same, complete with Lenses, Holder and Carrier, 4 glass designs.....\$65.00

COLOR BOX (sometimes called a Boomerang) is a metal box containing 6 Color Frames, and fitting into grooves on Spot Lights. A cord is attached to each Color Frame so that one or more Frames can be raised into position in focus of light as desired. The use of a Color Box makes possible quicker color changes than the use of single Color Frames.

Fig. No. 1840 Complete with 6 Color Frames.....\$17.50



Fig. No. 1840



LOBSTERSCOPE, OR OPTISCOPE. An 18-inch disc having 2 or 4 openings of various shapes fitted with gears, handle, and slides to fit color grooves on Spot Lights. When revolved rapidly, creates weird illusion of multiplying the number of performers. Approximates the flickering effect sometimes seen in motion pictures

Fig. No. 1830 Lobsterscope, 2 openings.....\$12.00
Fig. No. 1831 Lobsterscope, 4 openings..... 12.00

WOOD COLOR FRAMES

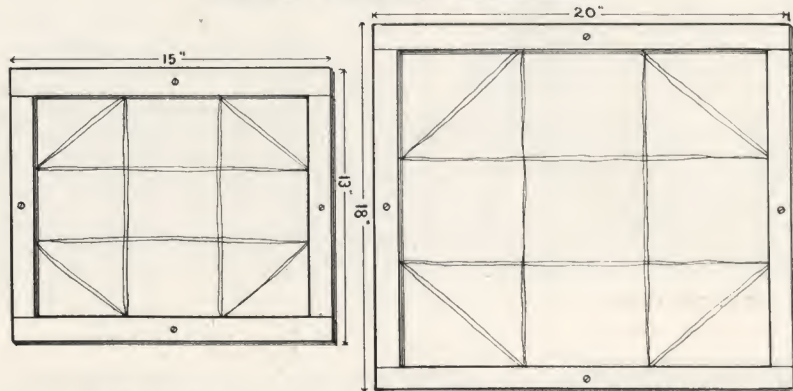


Fig. No. 1876

Fig. No. 1875

Wood Color Frames fit grooves on Flood Lights. Fine wires stretched across face of Frame protect the Gelatine Medium. Colored Gelatine Sheets of any desired shade can be furnished for these Frames. For list of colors, see page 57.

Fig. No. 1875 Wood Color Frame, for 1000-Watt Hanging and Stand Type Flood Light; 18 ins. x 20 ins.....\$ 6.00
Fig. No. 1876 Wood Color Frame, for 500-Watt Stand Type Flood Light, 13 ins. x 15 ins. .60

METAL COLOR FRAMES

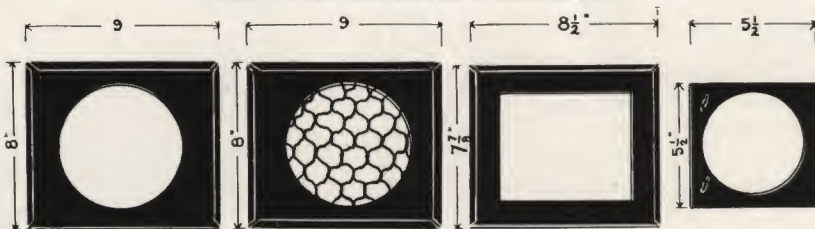


Fig. No. 1885

Fig. No. 1886

Fig. No. 1887

Fig. No. 1888

Metal Color Frames fit grooves on various Spot and Border Lights; Gelatine Sheets of any desired shades can be furnished for these Frames.

Fig. No. 1885 Standard Spot Light, 8 ins. x 8 1/2 ins.....\$0.25
Fig. No. 1886 Same, with wire mesh guard..... .50
Fig. No. 1892 Compartment Type Foot and Border, 6 x 7 1/2..... .35
Fig. No. 1893 Baby Hercules Spot Frame, 7 1/4 x 7 5/8..... .35
Fig. No. 4061 Aluminide Window Unit Frame, 200 watt..... 1.50
Fig. No. 5100 8-in. Spot Light Frame, 10 1/2 x 10 1/2..... .50
Fig. No. 5101 200-watt "Aluminide" Flood, also 200-watt Border and Foot..... 1.00
Fig. No. 5102 300-watt "Aluminide" Flood, also 300-watt Border and Foot..... 1.00
Fig. No. 5103 500-watt "Aluminide" Flood, also 500-watt Border and Foot..... 1.00
Fig. No. 5105 150-watt Proscenium or Entrance Strip..... .40
Fig. No. 5106 200-watt Proscenium or Entrance Strip..... .40
Fig. No. 5107 300-500 watt Proscenium or Entrance Strip..... 1.00
Fig. No. 5108 Outdoor Flood Light..... 2.25
Fig. No. 5031 150-watt Handy Unit..... 1.50
Fig. No. 5021 200-watt Handy Unit..... 1.75
Fig. No. 5011 300-500 watt Handy Unit..... 2.50
Fig. No. 5001 1000-watt Handy Unit..... 3.00
Fig. No. 5113 500-watt Column Light..... 1.00
Fig. No. 5114 1000-watt Column Light..... 1.00



GELATINE MEDIUMS

Order Gelatine Sheets by number. On all orders for less than \$5.00, to be sent parcel post, a charge of 15 cents will be made for packing, plus postage. While we cannot guarantee the non-fading of colors, our Gelatine Mediums are at all times the highest quality procurable.

Single Sheets of Gelatine, any color.....	\$0.15	1.12
Single Sheets of Gelatine, variegated.....	12.00	1.50
Per hundred Sheets plain color.....	12.00	10.00
Single Sheets of Rainbow Gelatine.....	1.00	
Size of Sheets, 19 ins. x 21 ins.		

GELATINE MEDIUMS

G-0 Clear	G-44 Lavender
G-1 Frost	G-45 Purple
G-5 Straw	G-46 Royal Purple
G-6 Golden Straw	G-50 Extra Light Blue
G-7 Light Amber	G-51 Light Blue
G-8 Medium Amber	G-52 Medium Blue
G-10 Dark Amber	G-53 Dark Blue
G-15 Light Orange	G-54 Peacock Blue
G-16 Medium Orange	G-56 Light Navy Blue
G-17 Dark Orange or Light Red	G-57 Dark Navy Blue
G-18 Pink Red	G-58 Medium Navy Blue
G-19 Medium Red	G-63 Light Emerald Green
G-20 Dark Red	G-64 Medium Emerald Green
G-24 Display Flesh	G-67 Light Leaf Green
G-25 Light Flesh Pink	G-68 Medium Leaf Green
G-26 Medium Flesh Pink	G-69 Dark Leaf Green
G-28 Dark Flesh Pink	G-80 Variegated Green and Yellow
G-29 Geranium Pink	G-81 Variegated Green and Red
G-33 Light Magenta	G-82 Variegated All Colors
G-35 Dark Magenta	G-83 Variegated Purple, Blue and Green
G-38 Light Red Violet	G-90 Rainbow
G-39 Dark Red Violet	

GELATINE BOXES

Metal cases for carrying gelatine mediums insure safe transportation and protect gelatines against excessive moisture. They are made of galvanized iron in two styles, the tube for small quantities and the box for large quantities. Both styles are supplied with loose cover.

Fig. No. 2995 Gelatine Tube, size 4 in. diameter, 20 in. length.....	\$2.25
Fig. No. 2996 Gelatine Box, size 20 x 22 x 1½.....	5.50

COLORINE

Colorine is a scientifically prepared solution for coloring incandescent lamps. Simply dip lamps, with current on, into solution and they immediately become brilliantly colored with a transparent finish. Colorine may be had either in a metal container large enough for dipping a 60-Watt Lamp, or in bottles with dipping can.

Colorine, per quart\$3.25

Fig. No. 2900 Straw	Fig. No. 2904 Moonlight Blue	Fig. No. 2908 Ruby Red
Fig. No. 2901 Amber	Fig. No. 2905 Dark Blue	Fig. No. 2909 Cardinal Red
Fig. No. 2902 Yellow	Fig. No. 2906 Pink	Fig. No. 2910 Violet
Fig. No. 2903 Green	Fig. No. 2907 Red	Fig. No. 2911 Purple
		Fig. No. 2912 Frosting

WEATHERPROOF COLORINE. For Outdoor use; semi-opaque.

Fig. No. 2920 Canary	Fig. No. 2923 Red	Fig. No. 2926 Dark Green
Fig. No. 2921 Orange	Fig. No. 2924 Purple	Fig. No. 2927 White
Fig. No. 2922 Pink	Fig. No. 2925 Dark Blue	

THINNER, OR BASIS. For thinning any of the above colors and making lighter colors.

Fig. No. 2930 COLORINE THINNER, per quart.....	\$3.25
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OBJECTIVE AND CONDENSING LENS



Fig. No. 1900—1908 Wide Angle Objectives Quarter Size Lenses

An Objective Lens is a series of finely ground lenses mounted in an adjustable brass tube for projecting Effects, Slides, etc., where it is desired to focus an image at a given distance. All Objectives quoted are $\frac{1}{2}$ Size, unless stated otherwise.

The following table, for Lantern Slides and Effects, gives the focal length of Lens required to project an image of given size at a given distance.

Table is figured for Slide opening $3\frac{3}{4}$ ins. by 4 ins., Mask opening $2\frac{3}{4}$ ins. by 3 ins., and for the longer side.

Fig. No.	Focus of Lens														PRICE
	10 ft	15 ft	20 ft	25 ft	30 ft	35 ft	40 ft	45 ft	50 ft	60 ft	70 ft	80 ft			
1900	6"	5	7½	10	12½									25.00	
1901	8"	3½	5½	7½	9½	11¼	13	15						25.00	
1902	10"		4½	6	7½	9	10½	12	13½					25.00	
1903	12"			5	6¼	7½	8¾	10	11¼	12½	15			25.00	
1904	15"			4	5	6	7	8	9	10	12	14	16½	25.00	
1905	18"					5	5¾	6½	7½	8¼	10	11½	13	25.00	
50 ft 60 ft 70 ft 80 ft 90 ft 100 ft 110 ft 120 ft 130 ft 140 ft 150 ft															
1906	20"	7½	9	10½	12	13½	15	16½	18	19½	21	22½		25.00	
1907	24"	6	7½	8¾	10	11	12½	14	15	16	17½	19		25.00	
1908	30"	5	6	7	8	9	10	11	12	13	14	15		25.00	

NOTE:

EXAMPLE I:

18-in. Lens used at a distance of 100 ft. from Light to screen will give an image $16\frac{1}{2}$ ft. on its longer side. In the table above at a distance of 50 ft. the image is given as $8\frac{1}{4}$, hence for 100 feet the size will be double or $16\frac{1}{2}$ ft.

EXAMPLE II:

15-in. Lens used at a distance of 105 ft. from Light to screen will give an image 21 ft. on its longer side. In the table, at a distance of 35 ft. the image is given as 7, hence for 105 ft. the image will triple or 21 ft.

WIDE ANGLE OBJECTIVES

Wide Angle Objective Lens is used where a very large image is desired and the distance is limited. It is a finely ground Lens in adjustable brass mounting, and enlarges image at rate of one to two feet for each foot of distance from Light.

Fig. No.	FOCUS OF LENS	15 feet	50 feet	PRICE
1924	12	6—10	24—34	\$18.00
1923	10	8—12	32—42	18.00
1922	8	14—18	38—54	18.00
1921	6	20—34		18.00
1920	4	40—60		18.00

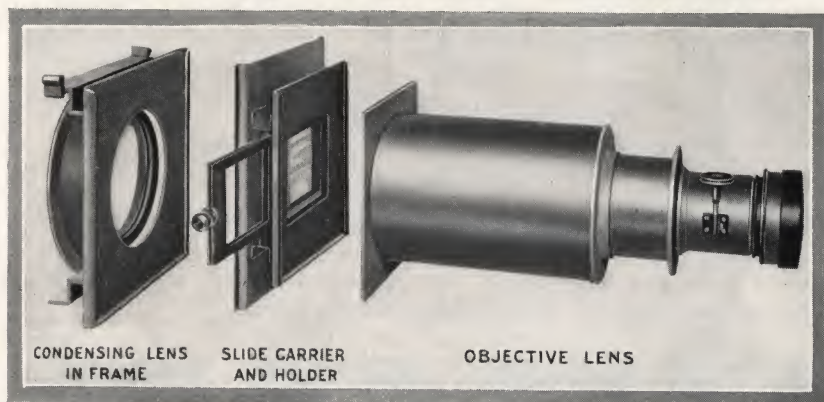


Fig. No. 1914

Fig. No. 2050

Fig. No. 1900—1908

CONDENSING LENS

Condensing Lens is a plano-convex French imported lens used in all our Spot Lights, and in conjunction with Effect and Lantern Slides. In the latter case, it is mounted in a Condensing Lens Holder. Its object is the concentrating and intensifying of light.

PLANO-CONVEX CONDENSING LENSES

Fig. No.	Diameter	Focus	Price	Fig. No.	Diameter	Focus	Price
1970	4½	6½	\$1.10	1982	5	9	\$1.75
1971	4½	7	1.10	1983	5	10	1.75
1972	4½	7½	1.10	1984	5	12	1.75
1973	4½	8	1.10	1988	6	7	2.50
1974	4½	9	1.10	1989	6	8	2.50
1975	4½	10	1.10	1990	6	9	2.50
1976	4½	12	1.10	1991	6	10	2.50
1977	4½	14	1.10	1992	6	12	2.50
1980	5	7	1.75	1993	6	18	2.50
1981	5	8	1.75	1996	8	9	7.00
				1997	8	14	6.00

CONDENSING LENS FRAME, as illustrated above (Fig. No. 1914): A metal frame for holding the additional Condensing Lens in position on front of Light, necessary for showing Effects and Slides. Holder fits into grooves on Spot Lights, and is provided with grooves for attaching of an Effect or Slide.

Fig. No. 1914 Condensing Lens Frame with lens.....\$8.50

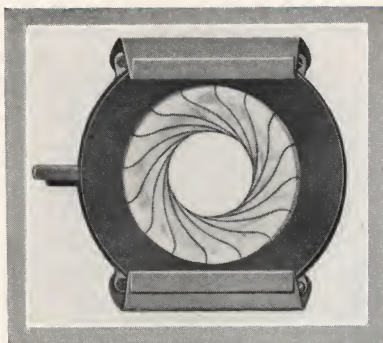


Fig. No. 2000

IRIS SHUTTER

Iris Shutter controls the area of light projected by a Spot Light. The Shutter, composed of brass leaves mounted in a metal frame, is operated by a handle at the side. By moving handle, the diaphragm is opened or closed from a pin-point to full opening, causing a gradual change of light area for fading on and off. It is generally used on spot lights with pin-point opening for finding objects that are to be spotted, and then opened to size desired. Fits grooves on all Standard Spot Lights.

Fig. No. 2000	4½"	.....	\$12.00
Fig. No. 2001	6"	.....	15.00
Fig. No. 2002	8"	.....	22.50

CUT OFFS

Various designs of Cut Offs are used for controlling and framing light area projected by Effects or Spot Lights. Cut Offs are made entirely of metal, and fit grooves on all Standard Spot Lights and Projective Effects.

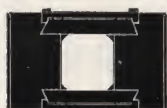


Fig. No. 2010



Fig. No. 2015



Fig. No. 2016

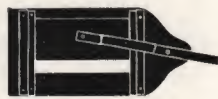


Fig. No. 2017



Fig. No. 2018



Fig. No. 2021

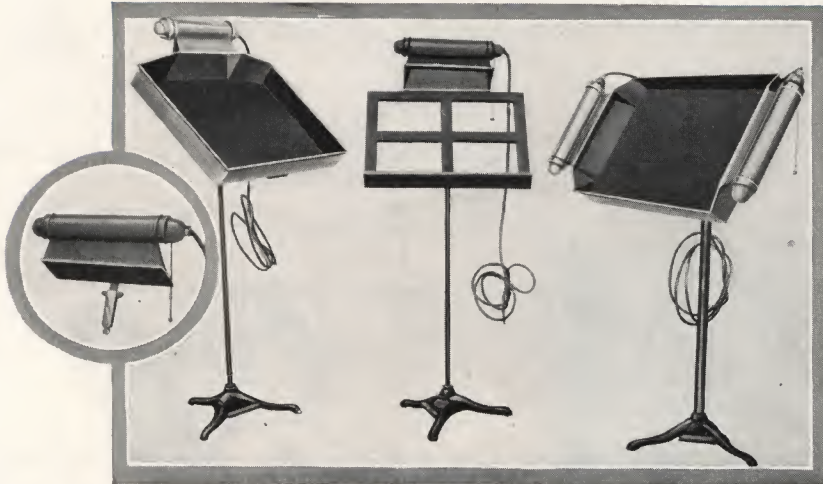
Fig. No. 2010	Shallow 4-way adjustable Cut Off for 6" Spot Light.....	\$3.50
Fig. No. 2011	Shallow 4-way adjustable Cut Off for 4½" Spot Light.....	2.75
Fig. No. 2012	Shallow 4-way adjustable Cut Off for 8" Spot Light.....	3.25
Fig. No. 2015	Effect Cut Off	1.50
Fig. No. 2016	Ripple Cut Off	1.50
Fig. No. 2017	Adjustable Effect Cut Off with lever for moving Effect up or down.....	3.50
Fig. No. 2018	4-way extension adjustable Cut Off for 6" Spot Light.....	4.50
Fig. No. 2019	4-way extension adjustable Cut Off for 4½" Spot Light.....	3.00
Fig. No. 2022	4-way extension adjustable Cut Off for 8" Spot Light.....	3.50
Fig. No. 2021	Diamond-Shaped Cut Off	2.00

LANTERN SLIDE HOLDER

Lantern Slide Holder with Slide Carrier: a metal holder fitting into grooves on Condensing Lens Holder, accommodating two regular Lantern Slides (3¼ ins. by 4 ins.); has grooves for holding Objective Lens.

Fig. No. 2050	Lantern Slide Holder with Carrier.....	\$5.00
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MUSIC STANDS AND FIXTURES



2125

2110

2120

2100

DIRECTOR'S MUSIC STAND is entirely metal constructed. The music rack, 16 ins. by 27 ins., has solid side rail to prevent side reflection of light. Two light fixtures are set into side rails, throwing light through slots directly on music. Inside of rack and rails is painted dull black; outside and light fixtures are finished in bronze. Telescoping iron base allows music rack to be set at desired height and angle. Wired complete, with pull chain sockets and 12 feet of wire.

Fig. No. 2100\$20.00

METAL MUSIC STAND has the same features and finish as the Director's Music Stand, but with only one light fixture, placed at top of rack. Music rack is 24 ins. by 16 ins. Finished in dull black and bronze; telescoping stand; pull chain socket and 12 feet of wire.

Fig. No. 2110\$12.75

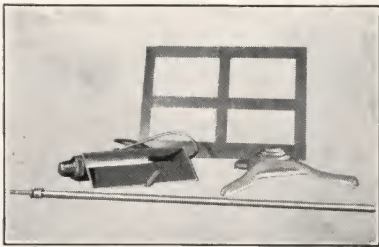


Fig. No. 2138

WOOD TOP MUSIC STAND is a much used type, being lighter in weight for traveling. Has removable light fixture, at top of music rack, throwing light through slot directly on music. Music rack is 20 ins. by 15 ins., finished in oak. Mounted on telescoping iron stand, complete with chain pull socket and 12 feet of wire.

Fig. No. 2120\$8.50

LIGHT FIXTURE FOR MUSIC STAND is a separate fixture with bracket to fit a removable holder which can be screwed on wood or metal frame of music rack, permitting instantaneous removal of fixture for traveling. Cylinder has slot for directing light on music; finished in bronze. Complete with pull chain socket and 12 ft. of wire.

Fig. No. 2125\$4.00

Special designs to order.

ORGAN AND PIANO LAMP. A highly ornamental light for organ and piano having a round cast bronze base, telescopic stand with a curved arm having two adjustments so that light can be directed at any angle. It is furnished with a round reflector, finished aluminum on the inside, the whole finished in Bronze de Paris, and furnished with push switch socket, 10 ft. brown silk cord and attachment plug.



Fig. No. 2142 Organ Lamp complete with 10 ft. cord and attachment plug\$12.50

Fig. No. 2142



Fig. No. 2150

Fig. No. 2151

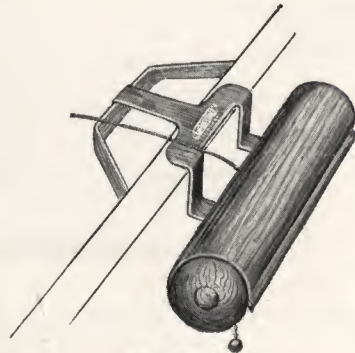


Fig. No. 2145

PIANO LAMP fits under the piano top and does not interfere with turning of music or raising lid of the instrument. Constructed of metal and finished in standard wood finishes. Felt lining on under side of clamp protects surface of piano.

Fig. No. 2145 Piano Lamp complete with pull chain socket, 8 ft. of cord, switch attachment plug\$5.00



Fig. No. 2158

CLEANER STAND: for theatres, garages and construction work. Easily portable. Telescoping stand, range 3 to 5 ft.; fitted with medium base socket; 50 ft. No. 16 Stage Cable and cable hook.

Fig. No. 2150 One light \$8.50

Fig. No. 2151 Three light 9.75

Fig. No. 2153 One light, Mogul Receptacle, with 50 ft. No. 14 cable 11.00

Fig. No. 2158 200-WATT ADJUSTABLE ALUMINIDE HANDY UNIT, mounted on telescopic stand, 50 ft. No. 16 stage cable, and cable hook\$12.50

These are also made in 100-150 Watt, 300-500 Watt and 1000-Watt types, and are useful for many purposes.

Fig. No. 2159 100-150 Watt, as above.....\$11.00

Fig. No. 2160 300-500 Watt Type..... 13.50

Fig. No. 2161 1000-Watt Type 15.00

LIGHTED SIGNS IN THE THEATRE

ACT ANNOUNCER; can be designed to fit any size space, and have openings for any desired number of acts. Usually consists of a metal box 5 ft. high, 24 ins. wide, by 5 ins. deep, containing ten compartments, each lighted by two medium base lamps and having grooves for opal glass slides on which are painted the names of the acts. The Act Announcer is placed in front of the proscenium and operated by a keyboard back stage, the openings being lighted one at a time when it is desired to announce an act. Two Act Announcers may be operated from the same keyboard.

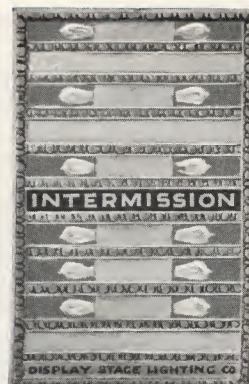


Fig. No. 2200

Fig. No. 2200 Single Act Announcer as described, with keyboard\$65.00

Fig. No. 2201 Double Act Announcer as described, with keyboard\$120.00



Fig. No. 2226



Fig. No. 2257



Fig. No. 2271

EXIT SIGNS, and Fire Escape Signs are constructed entirely of metal and may be set into or against walls or woodwork. The face of sign is usually ruby glass, with white lettering. The same type of sign may be used for smoking, ladies and check rooms. A metal face can be furnished which allows light to shine through the letter only.

Triangular or Double Faced Signs, extend away from wall and can be read from both directions.

Leaded Glass Signs are artistically designed of amber Cathedral Glass with red letters and have a much richer effect than plain glass sign. They can be furnished with any desired lettering. Letters are 8 ins. high in all signs. All signs are fitted with one medium base receptacle.

WALL TYPE EXIT SIGNS—SINGLE FACE (Glass slides in from side)

Fig. No.		8" High	
2220	10 x 12 Flashed Ruby Glass, etched	Exit	\$4.50
2221	10 x 12 Leaded Glass	Exit	6.50
2222	10 x 12 Metal Cutout, backed by ruby	Exit	6.50
2226	11 x 16 Ruby	Exit	6.00
2227	11 x 16 Leaded Glass	Exit	9.00
2228	11 x 16 Metal Cutout, backed by ruby	Exit	7.00
2232	11 x 16 Ruby	Exit & Number	6.50
2233	11 x 16 Leaded Glass	Exit & Number	10.00
2234	11 x 16 Metal Cutout, backed by ruby	Exit & Number	6.50
2238	11 x 24 Ruby	Exit & Number	9.00
2239	11 x 24 Leaded Glass	Exit & Number	12.00
2240	11 x 24 Metal Cutout, backed by ruby	Exit & Number	9.00

FLUSHED WALL TYPE EXIT SIGN—SINGLE FACE
(Hinged Cover type)

2244	11 x 16	Flashed Ruby Glass, etched	Exit	\$7.00
2245	11 x 16	Leaded Glass	Exit	12.00
2246	11 x 16	Metal Cutout, backed by ruby	Exit	12.00
2250	11 x 16	Flashed Ruby Glass, etched	Exit & Number	7.50
2251	11 x 16	Leaded Glass	Exit & Number	13.00
2252	11 x 16	Metal Cutout, backed by ruby	Exit & Number	7.50
2256	11 x 24	Flashed Ruby Glass, etched	Exit & Number	10.75
2257	11 x 24	Leaded Glass	Exit & Number	14.00
2258	11 x 24	Metal Cutout, backed by ruby	Exit & Number	14.00

WALL TYPE EXIT SIGN—DOUBLE FACE

2262	10 x 12	Flashed Ruby Glass fronts, etched letters	\$9.00
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WALL TYPE EXIT SIGN—TRIANGULAR

2270	10 x 12	Flashed Ruby Glass, etched letters	\$12.00
2271	11 x 16	Flashed Ruby Glass, etched letters	14.00

(Above Types Are Plain)

FOR BALL MOULDING BORDERS, ADD THE FOLLOWING AMOUNTS TO ABOVE PRICE

10 x 12	.60	11 x 16	.60	11 x 24	.85
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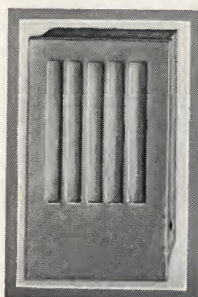


Fig. No. 2290

AISLE AND STEP LIGHT: A metal compartment containing one medium base receptacle and having a louver front for throwing light down on floor. Is set into step with front flush with face of woodwork.

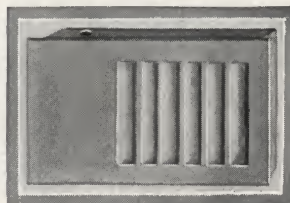


Fig. No. 2291

Fig. No. 2290

Aisle Light, 8½ ins. by 5 ins.
\$4.75

Fig. No. 2291

Step Light, 8½ ins. by 5 ins.
\$4.75

CHAIR LIGHT; is small and compact and arranged to fasten to side of chair. It is slotted to allow subdued light to be thrown on the floor. Made of cast aluminum, overall size 5¼ ins. by 3¼ ins. by 3 ins. high, with a knockout for ½-in. pipe. The flat side is hinged to allow for re-lamping; accommodates a 10-watt lamp.

Fig. No. 2292 Chair Light \$4.50

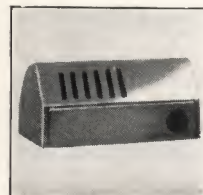


Fig. No. 2292

ILLUMINATED DIRECTIONAL AND ADVERTISING SIGNS

For Stores, Hotels and Advertising

A B C signs are new and distinctive. They are made of metal with letters of hardened silk treated with a special preparation rendering them waterproof and non-inflammable. Golden amber is generally used for reading matter against the opaque background of metal assuring visibility at great distances. A B C signs stand out even in highly illuminated spaces.

All signs are equipped with panels which are removable and can be varied from time to time.

All types of symbols, trademarks, lettering, can be duplicated in the original style of lettering and colors. See pages 65 through 68.

BRACKET TYPES

A solid bronze bracket sign of unusual beauty and planned to harmonize with practically all styles of decoration. Bracket type signs are intended usually for permanent installation and deserve to be of fine quality. They are used in lobbies, over doorways, elevators and in corridors. The A B C bracket-type sign is made for installation over a 3-in. outlet box and furnished complete with sockets wired and ready for installation.



Fig. No. 5200 Panel for lettering 5 ins. by 19 ins.



Fig. No. 5201 Panel for lettering 5 ins. by 13 ins.

FLUSH TYPES

The solid bronze frame sets flush against the wall in which is inserted a 4-in. depth 20-gauge iron white interior lamp box. The frame is supported by four bronze screws held in the wall by lead expansion sleeves. Provided with a $\frac{3}{4}$ -in. opening for running in cable, but without sockets.



Fig. No. 5212



Fig. No. 5210



Fig. No. 5211

Fig. No. 5210	Panel for lettering 5	ins. x 13 ins.	 (designed for 2 sockets)
Fig. No. 5211	Panel for lettering 8½	ins. x 24 ins.	 (designed for 2 sockets)
Fig. No. 5212	Panel for lettering 5	ins. x 19 ins.	 (designed for 3 sockets)
Fig. No. 5213	Panel for lettering 7	ins. x 19 ins.	 (designed for 3 sockets)
Fig. No. 5214	Panel for lettering 5	ins. x 24 ins.	 (designed for 3 sockets)

SOFFIT TYPES

Suspended from above, this solid bronze type is intended for open spaces where legibility from a distance is required. The clear golden light of the A B C letters meets this demand with astonishing satisfaction and is a particularly valuable phase of the A B C invention. Hanging from ceilings, archways and over doorways, it easily attracts the eye and can be made much smaller than the usual sign made for the same purpose because of its great legibility and clearness. The stem can be cut to cover all length required. Wired complete with sockets.



Fig. No. 5220 Panel for lettering 5 ins. by 19 ins.

Fig. No. 5221 Panel for lettering 8½ ins. x 12 ins.



Fig. No. 5221

NOTE: The No. 5221 Soffit Type is triangular in shape, having three panels of the same size with a frosted glass plate at the bottom, thus affording illumination underneath; an original idea for use where a view from three directions is required. Provided with 3 sockets and wired for installation.

PROJECTING WALL TYPE



Fig. No. 5230

A solid bronze double-faced angle type sign which fastens over a 3-in. outlet box. By means of the frosted glass plate at the bottom, it provides a mellow illumination underneath. The legend retains the full brilliancy of other A B C types.

Fig. No. 5230 Panels for lettering 8½ ins. by 12 ins.

FLOOR STAND TYPES

This is more than a sign; it is a beautiful and distinctive ornament which harmonizes with the finest interior decoration. Wired complete with cord and sockets. It can, of course, be provided with different reading matter on each side.

- Fig. No. 5240** Panel for lettering 5 ins. x 19 ins. (4 ft. 8 ins. over all)
Fig. No. 5241 Panel for lettering 7 ins. x 19 ins. (4 ft. 10 ins. over all)
Fig. No. 5242 Panel for lettering 5 ins. x 19 ins. (6 ft. 8 ins. over all)
Fig. No. 5243 Panel for lettering 7 ins. x 19 ins. (6 ft. 10 ins. over all)



Fig. No. 5240

STAND TYPES

Windows, counters, tables, etc., have spaces often neglected where attractive signs can be utilized to good advantage. We show here a few suggestions for such uses. Those with frames are of ornamental cast iron with plated bronze finish backed by a substantial metal housing finished to harmonize with the frame. All stand types are furnished complete with sockets and 6 feet of extension cord and plug.

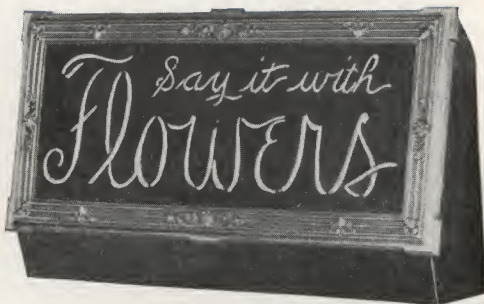


Fig. No. 5256

- Fig. No. 5250 Panel for lettering 5 ins. by 13 ins., single face
- Fig. No. 5251 Panel for lettering, 5 ins. by 13 ins., double face
- Fig. No. 5252 Panel for lettering, 5 ins. by 19 ins., single face
- Fig. No. 5253 Panel for lettering 5 ins. by 19 ins., double face
- Fig. No. 5254 Panel for lettering 8½ ins. by 12 ins., double face
- Fig. No. 5255 Panel for lettering 8½ ins. by 12 ins., double face
- Fig. No. 5256 Panel for lettering 7 ins. by 19 ins., single face
- Fig. No. 5257 Panel for lettering 7 ins. by 19 ins., double face
- Fig. No. 5258 Panel for lettering 5 ins. by 24 ins., single face
- Fig. No. 5259 Panel for lettering 5 ins. by 24 ins., double face
- Fig. No. 5260 Panel for lettering 5¾ ins. by 13 ins., double face
- Fig. No. 5261 Panel for lettering 5¾ ins. by 13 ins., single face

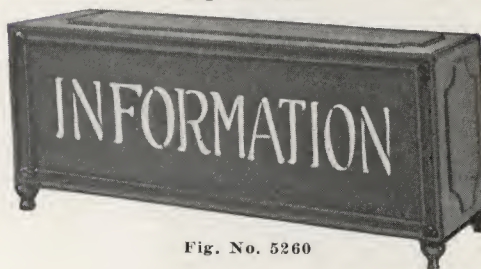


Fig. No. 5260



Fig. No. 5254

The stand types Fig. Nos. 5250 to 5259 inclusive can also be furnished with frames of solid bronze at an increased cost. The types Fig. Nos. 5260 and 5261 are entirely constructed of cast iron with a plated bronze finish, the bottom resting on four legs.

BRONZE PLATED BRACKET TYPES

This particular model, finished in bronze, is designed primarily for floors in commercial buildings where solid bronze is not a necessity. A special feature of Fig. No. 5281 provides for a double compartment so that two separate circuits of lamps can be used, thereby enabling the lower or upper part to be independently lighted. Furnished ready for installation over 3-in. outlet box.

Fig. No. 5280 Panel for lettering 5¾ ins. by 13 ins.

Fig. No. 5281 Panel for lettering; divided into upper and lower compartments 2¾ ins. by 13 ins. each



Fig. No. 5280



Fig. No. 5295

WROUGHT IRON BOX TYPES

Here is ornamentation and efficiency combined in a sign of Spanish design. The surpassing beauty of this model is impossible to convey by mere pictures.



Fig. No. 5297

13 ins. by 38 ins., four outlets 25 watts each, double face.
15 watts each, single face.



Fig. No. 5290

PLATED SOFFIT TYPES

An ornamental bronze plated finish sign; an inexpensive attractive type for use where cost is a first consideration. Although plated, it has the appearance of solid bronze.

Fig. No. 5290 Panel for lettering 5¾ ins. by 13 ins., single face

Fig. No. 5291 Panel for lettering 5¾ ins. by 13 ins., double face

SHEET METAL BOX TYPES

Below is shown a style of box type signs.

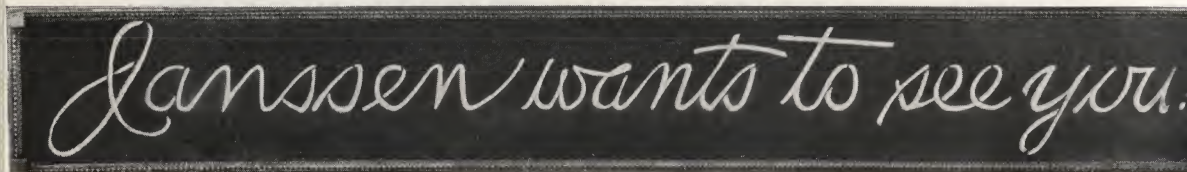


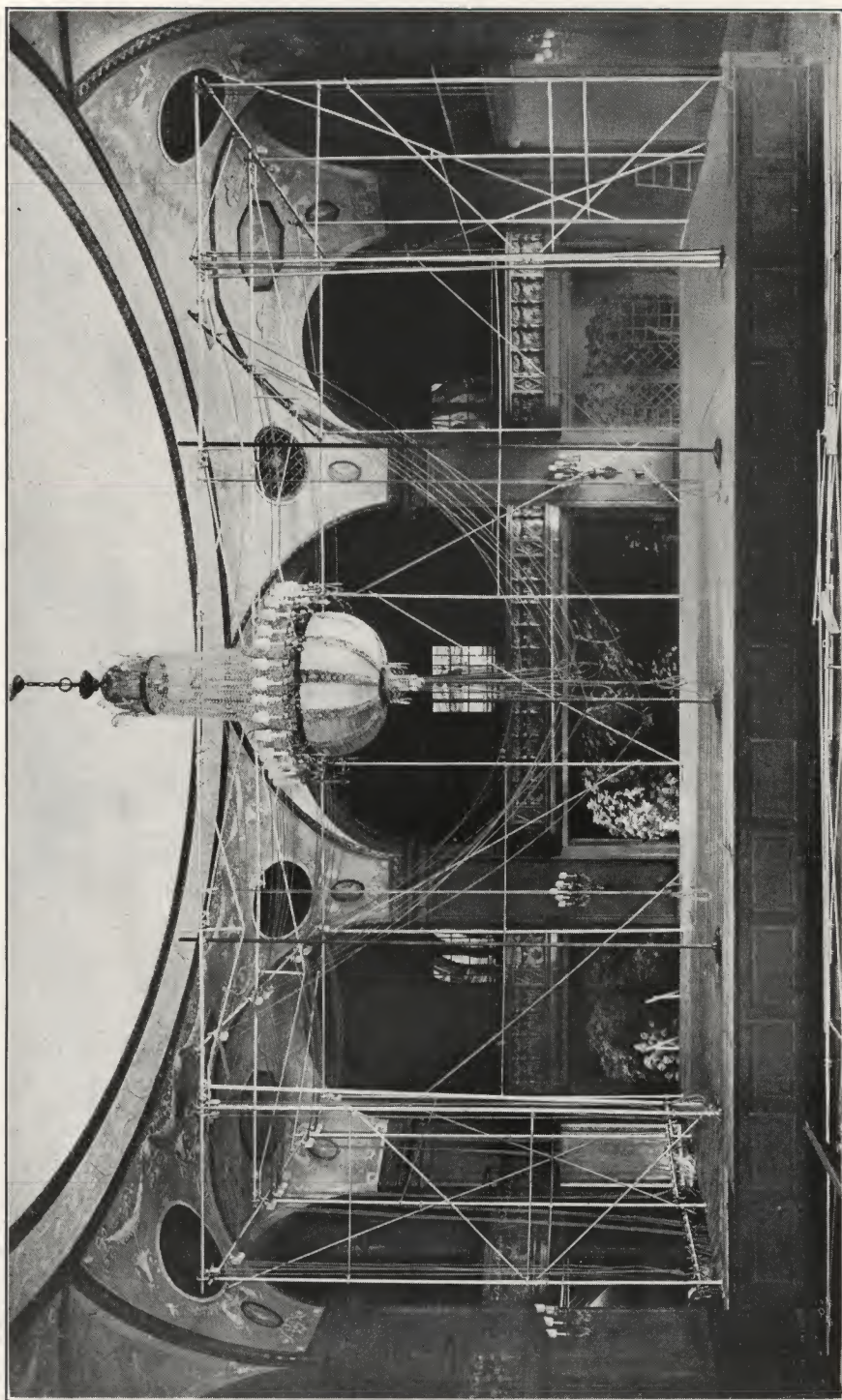
Fig. No. 5296 This sign is 10 ft. long and 13 ins. high. Lighted with 14 60-watt lamps it successfully withstands a flood of illumination of several hundred foot-candles!

IMPORTANT

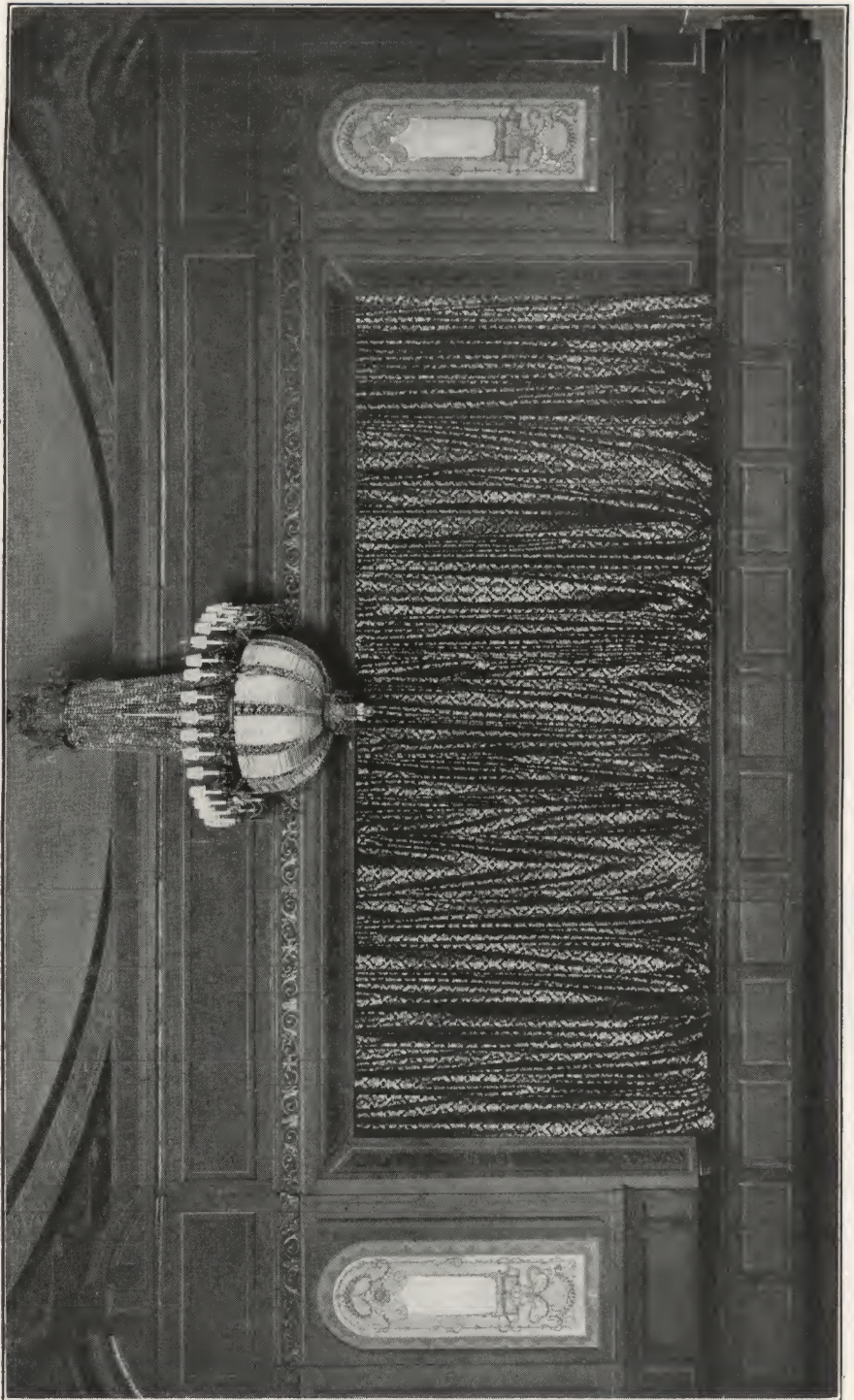
Although an assortment of signs are shown on these pages, we can furnish many other types to meet with special requirements, both as to style of lettering and inclosing framework.

HOW TO SPECIFY FOR ABC SIGNS

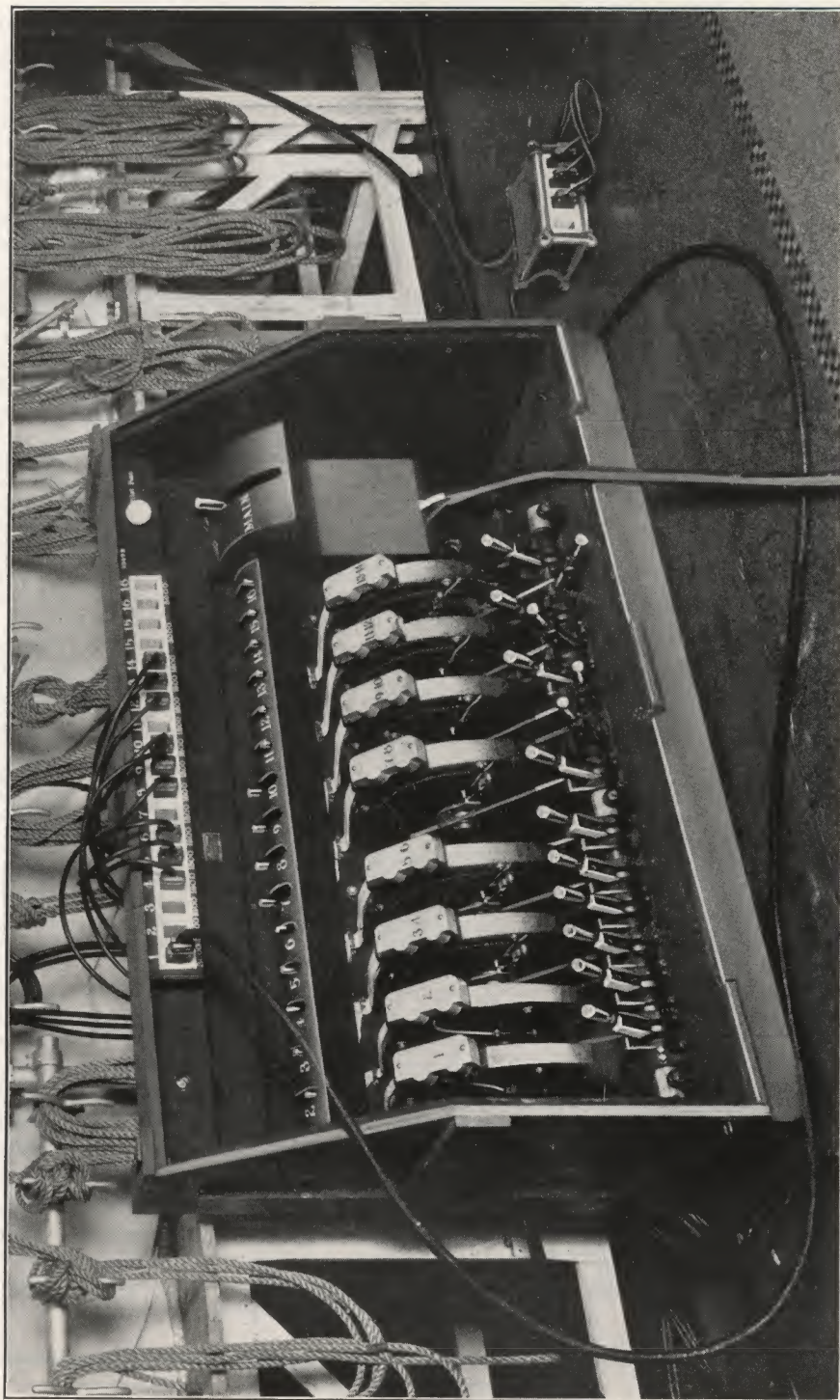
1. Wordings needed (as concise as possible).
2. Distance from which it is to be read.
3. Single or double face.
4. Finish desired.
5. Type of sign, i.e., bracket, flush, hanging, special, etc.
6. Style of lettering (and if other than golden amber is desired).
7. Framework: cast bronze or iron, or sheet metal of bronze, copper or iron duco finish.



Framework of the portable stage of the Hotel Pennsylvania, New York, in position.



The portable stage of the Hotel Pennsylvania, New York, set up in the Grand Ballroom



Portable Switchboard Dimmer Box and Tie Rail detail of the Portable Stage Rigging at the Hotel Pennsylvania, New York.



DISPLAY PORTABLE STAGE RIGGING

The Display Portable Stage Rigging is a recent development in theatrical equipment and fills a long felt want, making possible theatrical performances with proper lighting and scenic effects in ball rooms, lodge rooms, in the drawing room, or out-of-doors. The Display Portable Stage Rigging forms a complete stage with all necessary rigging for lights, curtains, draperies, border masks, wings and proscenium, with all the facilities and appearance of permanent equipment.

Display Portable Stage Rigging can be erected in a few hours with no other tools than a wrench and a pair of pliers, and without making fast to walls, ceiling, or floor.

Construction is mainly of wrought iron pipe, resting on anchor circular bases, braced diagonally for strength and rigidity. Our Adjustable Pipe Clamp takes the place of all fittings and connections usually used in pipe fitting. By its use, it is possible to join the end of one pipe to another pipe at any point along its length, either at a right angle or at a diagonal, making as secure a connection as an elbow or a tee. Also important is our Display Sleeve Joint for telescoping pipes, which allows us to make every unit of the Rigging telescopic, and therefore adjustable in length. This means that the Display Portable Stage Rigging can be extended approximately 33 1/3 per cent on any dimension beyond its minimum size, allowing use in a number of different places and making use of the utmost available space. The telescoping section of each unit is marked in feet and inches to make easy the adjusting of the Rigging to desired extension.

Standard Lighting Equipment is used as in a permanent theatre, Border Lights and Flood Lights hung from pipe battens, Strips and Spot Lights attached to up-rights, and Portable Foot Light Sections.

Above stage on three pipes running from front to rear of rigging can be hung as many sets of pulleys as desired for the hanging of lights, drops, draperies, etc., and as all connections are made with the Adjustable Pipe Clamp, it is a simple matter to rearrange any overhead equipment. The lines tie off, as in permanent construction, on a malleable iron pin rail, using our specially designed malleable Tie Pin.

The two uprights on each side at front of stage, when masked, hide the entrances and with a drapery thrown across the top, frame the stage opening and form the proscenium. Curtains can be arranged to draw with endless lines, or drape, and wings may be either draperies or regular scenic wings.

The Portable Stage Rigging is built to order to any dimension and fitted with any desired number of fixtures and lighting units. We will be glad to submit estimates to your requirements and offer our best advice as to equipment necessary. When ordering for definite location, give dimensions of space—width, depth, and height.

Display Stage Rigging is ordinarily built to definite dimensions, but can also be furnished adjustable to extend one-third of its minimum size. As the cost of an adjustable rigging far exceeds the cost of the non-adjustable, we do not recommend its use unless the stage rigging is to be used in different locations.

In filling orders for the Display Portable Stage Rigging, we ordinarily recommend that pipe be purchased in the home town of the customer since it is standard; we supply all stage parts, detailed blue prints showing the parts, the pipe required, the lengths of same, and all necessary information and data for the complete assembly of the Portable Stage Rigging.

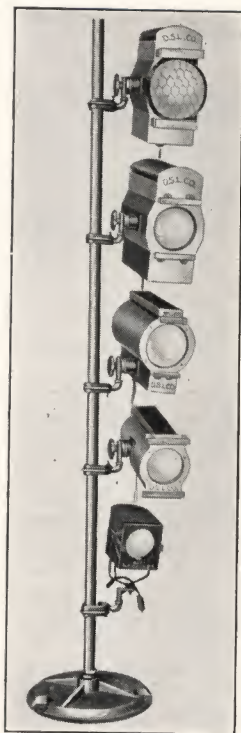
An example of the flexibility of Display Portable Stage Rigging is shown in these photographs of the stage built for the Hotel Pennsylvania, New York. This is set up in their grand ballroom for opera, theatrical performances, etc., and quickly dismantled. See pages 69 and 70.

Note:—All fittings used in connection with Display Portable Stage Rigging are of steel and malleable iron, and are fully covered by patents.

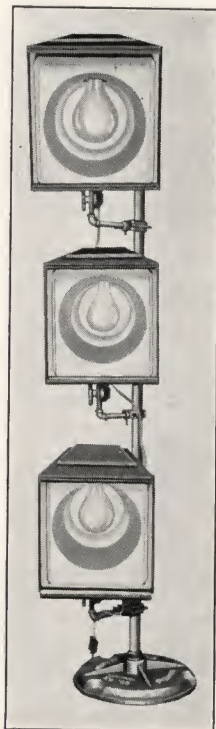
TORMENTORS

The Tormentor illustrated is portable and can be used anywhere on the stage. An 8-in. 1000-2000-watt Mazda Spot Light, 6-in. 1000-2000-watt Mazda Spot Light, 6-in. 500-1000-watt Mazda Spot Light, 250-watt Focusing Baby Spot Light, and Baby Hercules Spot Lights are shown mounted thereon.

All lights are arranged on adjustable side arm brackets so that light can be thrown in any direction.



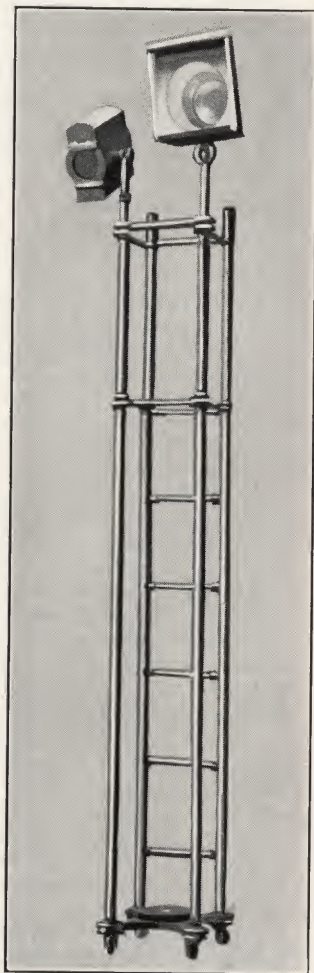
Another arrangement of the Tormentor showing two 1000-watt Aluminide Flood Lights and one 500-watt Aluminide Flood Light mounted on one stand.



SPOT LIGHT TOWERS

A portable arrangement of iron pipe and pipe clamps forming a ladder whereby an operator can adjust lamps or change colors rapidly and conveniently.

The framework consists of four lengths of 1¼-in. black steel pipe mounted on a four-legged, leather-tired caster base, the whole properly braced and rigid. Any number of spot lights, effects, flood lights, can be mounted on this framework and easily controlled.





EQUIPMENT SUGGESTIONS

The lighting of stage settings has an importance that is constantly receiving more attention from producers and designers. At best, painted scenery is flat and artificial looking, but with a palette of colored lights, it can be made to have depth, atmosphere, and life. While each setting involves an individual problem, making it impossible to lay down rules, the foundation of most lighting effects is accomplished with Standard Lighting units as shown in this catalog, and there are well defined methods of arranging these units for the greatest efficiency and flexibility which can be laid down as rules of stage lighting.

While the problem is patently to simulate an atmospheric condition of nature or the artificial illumination of the home, office, shop, etc., the most important point is to properly light the space in front of the scenery which is occupied by the performers with high lighting, so that their acting may have dramatic effect.

All lighting should be from concealed sources, but should have the appearance of coming from visible or natural sources. Doors, windows, fireplaces, lamps, wall brackets, etc., are provided for the purpose, but all visible lamps should be of low candle power, and the actual light radiate from a concealed unit.

FOOT LIGHTS are essential for most plays, but they should be well under control and act only as reflected light. When Foot Lights are too bright they have a tendency to cause shadows on ceilings or backgrounds and when light costumes are worn by performers there is a tendency to reflect an unpleasant glare. The lighting of the background must be strong enough to offset the lighting of Foot Lights. A Foot Light trough should be provided along the apron of the stage having a number of outlet receptacles properly wired. Foot Light Strips should be in not less than three colors and 3 sections, and may be portable (see page 29), so that when all three sections are not required as foot lights they may be used elsewhere. Provide trough with sectional covers so that when not in use strips may be removed or laid flat and trough entirely eliminated.

DOUBLE PIPE BATTENS are hung in accordance with the number of Border Lights required, depending on size of stage. Upper pipe battens contain wired troughs fed with Border Light cable and have a number of connector outlet receptacles along full length of trough wired in circuits. Lower pipe battens are for hanging various light units that may be required for setting, such as Strip Lights, Flood Lights, etc., taking their current from the outlets in trough above. Lighting units to be used as Border Lights should be in several sections to facilitate handling, and may be from 75-watt to 1000-watt type. It is advisable that the first border should consist of from three to four six-outlet sections of Aluminide Type (page 22), provided with grooves for Color Frames. This type will accommodate from 75- to 200-watt lamps, and give a diffused light over entire scene. A more flexible method of lighting on the first border is accomplished by the use of our Baby Hercules (combination spot and flood light) Border (see page 23), as it enables the concentration of light where desired.

Back border for lighting drop or cyclorama should be an especially designed type giving the maximum amount of spread and projection of an equally diffused light. The types used for this purpose may be from 300- to 500-watt or, where a brilliant background is desired, from 750- to 1000-watt and should be in three colors. Where an exceptionally high cyclorama is used it is necessary that lighting be from bottom as well as top. The compartment type Aluminide Border and Foot Lights (pages 22 and 25), properly angled and placed, give an equally diffused light over the entire cyclorama.

TORMENTOR LIGHTS. An effective source of spot lighting is from back of first tormentor. Various size Spot Lights are arranged on a vertical pipe fastened back of tormentor, and are easily reached from a ladder or platform when focus



and direction of light is to be changed. Spot Lights from 250 to 1500 watts are used for high-lighting scenes, following performers, and for projecting Effects. (Page 73.)

STRIP LIGHTS (page 26). Strip Lights are used in entrances, back of windows, ground rows, etc., and may be wired in one or more circuits for color. Portable Flood Lights are also used back of windows, on back drop, where a larger volume of light is required, and in entrances, particularly for exteriors.

STAGE POCKET OUTLETS (page 90). Sufficient pocket outlets should be placed at right and left of stage, 6 to 8 ft. from proscenium opening and approximately 6 ft. apart and extending to full depth of stage. These are for the connection of portable equipment that may be used on the stage, as Strip Lights behind ground rows, table lamps, fire places, etc.

AUXILIARY PANELS should be provided at right and left of stage in an accessible place for connecting auxiliary switchboards, Plugging Boxes, etc. Auxiliary Panels should be mounted in a metal box with 3-wire main switch with solid neutral and branch fuse gaps from 100 amperes up, with terminals provided with heavy wing nuts and bushed knockouts for cable.

DIMMERS (page 85), are essential for the proper control of light intensity and the working of effects, where light is to be faded on or off, or one color blended into another. Each circuit should be on a separate dimmer. Portable Switchboard Dimmer Boxes are valuable as an auxiliary to permanent equipment for special lighting (page 82).

ALUMINIDE

A comparatively recent development in Aluminide. This is our trade name (registered) for the reflector now used in our flood, border, foot, proscenium, and individual units, and covers both the reflector and finish. Aluminide absorbs yellow rays and gives an evenly diffused white light. Aluminide reflectors have been designed by lighting engineers with a view to make them as compact as possible, and at the same time to bring out the maximum efficiency of the various standard size pear-shaped lamps used. Aluminide does not deteriorate, soap and water cleans and enhances the reflecting qualities.

ADJUSTABLE PIPE CLAMP

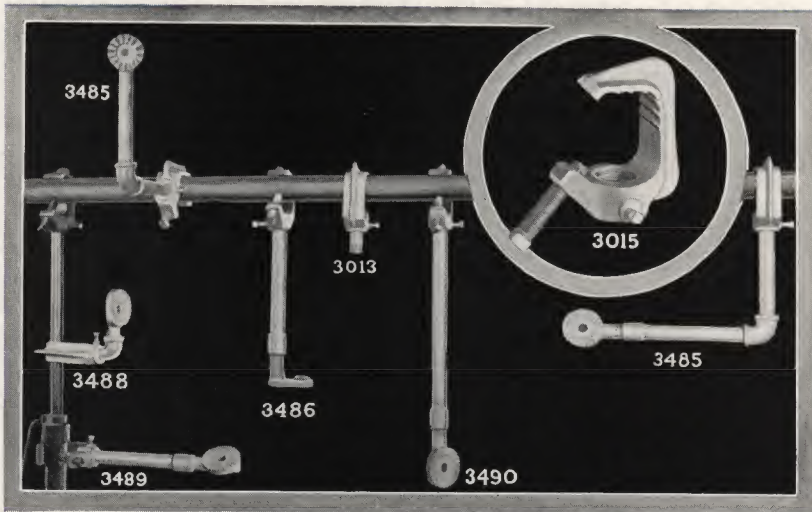
Replacing chains for the hanging of Borders, Flood Lights, Spot Lights and other equipment that hang from pipe battens, the Adjustable Pipe Clamp, covered by patents, holds an important position among recent developments in theatre equipment. It is quicker and easier to make fast than chains, and holds the light steadily in position at any desired angle. Also holds horizontally from an upright pipe, or grips the edge of a board or piece of structural ironwork, and with the use of elbows and nipples it is possible to hang a light in any conceivable position.

The Adjustable Pipe Clamp is malleable iron cast in one piece and is adjusted with a single setscrew. It is made in two sizes: No. 3015 grips any pipe from $\frac{1}{2}$ in. to $1\frac{1}{2}$ ins. diameter; No. 3011 grips from $\frac{1}{4}$ to $\frac{3}{4}$ in. The larger size is usually used for hanging standard equipment, the clamp being attached to the light by desired length nipple.

To hang, simply hook Clamp over pipe and it supports itself while the one setscrew is being tightened. The Clamp then grips the pipe like a vise, holding the Light at the desired angle. The Light may be instantly removed or slid along the pipe by loosening setscrew.

While the Adjustable Pipe Clamp was designed primarily for the hanging of lighting equipment, it has numberless other uses, taking the place of most of the fittings used in temporary structural pipe work, as demonstrated in our Display

ADJUSTABLE PIPE CLAMPS



Portable Stage Rigging shown on page 104. With sections of pipe threaded at the ends for Adjustable Pipe Clamps, it is possible and very simple to construct any structural rigging desired, and having the strength of regular pipe fittings. The Clamp grips and holds fast at an angle, as used in diagonal bracing.

The advantage of the Clamp in structural work is that it cuts to a minimum the time and work in assembling and dismantling.

Adjustable Pipe Clamps are furnished on all of our equipment intended for hanging, but may be purchased separately for use on equipment already installed. It is very simple to attach Clamp to any Light which is fitted with a swing joint. Illustrated are a number of clamp arrangements regularly used for attaching lighting units to battens at desired angles and distances from the batten. They have proven a great convenience in solving hanging problems.

Fig. No. 3011	Grips $\frac{1}{4}$ -in. to $\frac{3}{4}$ -in. pipe, taps up to $\frac{1}{2}$ -in. pipe.....	\$1.00
Fig. No. 3012	Standard size tapped for $\frac{1}{2}$ -in. pipe.....	1.25
Fig. No. 3013	Standard size tapped for $\frac{1}{2}$ -in. pipe, close nipple.....	1.50
Fig. No. 3014	Standard size tapped for $\frac{3}{4}$ -in. pipe.....	1.50
Fig. No. 3015	Standard size tapped for 1-in. pipe.....	1.75
(Gripping Space same on all Standard Clamps, $\frac{1}{2}$ in. to $1\frac{1}{2}$ ins.)		
Fig. No. 3485	Gooseneck Pipe Clamp; 6-in. extension elbow and swing joint.....	\$3.00
Fig. No. 3486	Hanging Pipe Clamp for Baby Hercules Spot.....	2.50
Fig. No. 3488	Side Arm Bracket (close fitting) and swing joint.....	2.50
Fig. No. 3489	Hanging Pipe Clamp with 6-in. nipple and swing joint.....	2.50
Fig. No. 3490	Hanging Pipe Clamp; 12-in. nipple and swing joint.....	2.75

SHOW WINDOW LIGHTING



Courtesy of Geo. A. Smith, United States Rubber Co.

SHOW windows should be miniature stages on which the merchant sets the drama of his merchandise. No longer is a mere pile of merchandise sufficient to attract the passer-by, for the merchant must constantly try for unusual effects that will dramatically catch the passing eye, but few have realized the tremendous possibilities of adding dramatic lighting effects to enhance the beauty of the display at night. When streets are dark, comes the great opportunity to make the window tell its story in a beautiful way, and attract people as moths are drawn to a candle.

To do this the lighting equipment must be as flexible as the lighting units of the theatre, allowing instant adjustment of color and the direction of light where desired. The fixed lighting system is inflexible and a great light waster, throwing as much light on the fixtures as on the merchandise, and allowing little change in the appearance of the window.

Years of experience in stage lighting have enabled us to perfect a compact lighting unit so flexible that it permits the instant changing of the entire lighting scheme as often as desired, giving each window a distinct individuality. It is economical because there is no waste of light, and because its mechanical perfection multiplies the candle power of the bulb over four times. (See pages 78 through 80.)

BABY HERCULES SPOT AND FLOOD LIGHT



Fig. No. 940

BABY HERCULES also has a variety of uses that greatly enhance its value to the merchant. Its neat, attractive finish allows its use in the store even though in a position not concealed. Equipped with daylight blue gelatine in the Color Frame, it becomes an ideal light for matching materials. And for the feature lighting of any merchandise to which attention is specially desired, it will throw into bold relief any object on which it is focused.

BABY HERCULES is a light-weight compact spot and flood light finished in a dull black rust-proof finish, small enough to conceal easily in corners of windows or between glass and ceiling. Its width is 6 ins., height 7 ins., length 13½ ins., weight including base and cord 9 lbs. The hood, constructed of stamped steel, swung in a yoke, is mounted on a base

which may be used as a standard; openings are provided for fastening to a 3-in. or 4-in. outlet box or ceiling. The yoke and base are malleable iron. Hung in any position it will turn in all directions throwing light where desired and focusing on chosen objects. The hood is thoroughly ventilated at top, back, bottom, and around the lens, and carries a 250-Watt Concentrated Filament Type G 30 Lamp; has a 3¾-in. Spherical Reflector; sliding lamp base which allows adjustment of focus; 5-in. Imported Condensing Lens. Front of light is detachable, giving ready access to lamp and also converting the light from a Spot to a Flood Light.

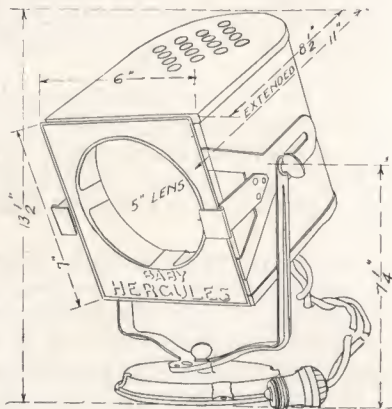
Thumb screw at bottom for focusing has a 3-in. range of adjustment. The entire front containing the lens is telescopic, allowing a further adjustment of 2 ins. This makes possible the focusing from a 2-ft. spot to a 10-ft. spot at a 10-ft. range.

Spring clips are provided to hold color frame when used either as a spot or flood light.

BABY HERCULES Combination Spot and Flood Light is shipped completely equipped for window lighting with yoke, removable base, 8-ft. cord, separable plug, color frame (Fig. No. 1893), and three pieces assorted colored gelatine, packed in carton, \$14.50.

Shipping weight, 10 lbs.

250-Watt G 30 Concentrated Filament Lamp	\$1.75
400-Watt G 30 Concentrated Filament Lamp	\$3.00



BABY HERCULES SPOT AND FLOOD LIGHT

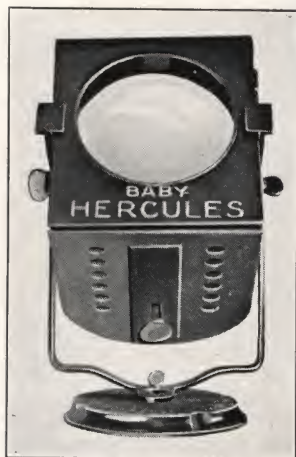
(Various illustrations of its use)



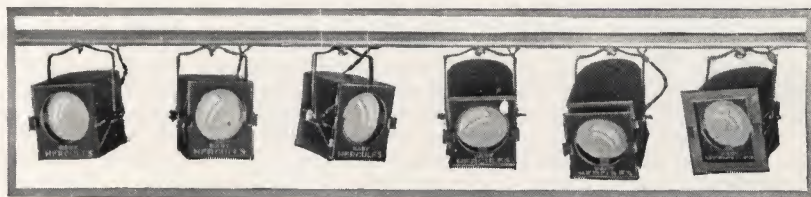
Extended front with color frame attached



Suspended from ceiling
front extended for small spot



Baby Hercules Burner
complete assembly Fig. No. 925



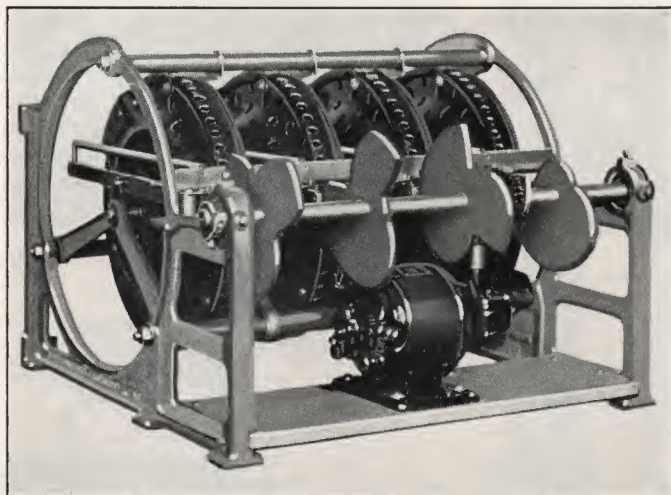
A series of Baby Hercules adjustable combination spot and flood lighting units, mounted on a metal wiring trough, can be suspended from ceiling or mounted on wall—made in any length, wired one or more circuits on 12-in. centers.

Price per outlet with color frame, \$14.00.

AUTOMATIC COLOR BLENDINGS

Automatic Color variation may be obtained by using a series of Baby Hercules units in conjunction with our standard bank of dimmers.

The four colors, red, blue, green, and yellow, which properly proportioned will give white light, are so controlled by motor driven dimmers that between the up and down action of the dimmers every color and shade is brought into play. This produces the effect of motion. The motor, being on separate switch, can be stopped at any point desired, should the intention be to feature a certain color effect for some length of time, rather than the moving procession of colors.



STANDARD MOTOR OPERATED DIMMERS

Fig. No. 2398 Bank of four dimmers for four circuits of any wattage up to and including 1000 watts, complete as per illustration ...\$225.00

Fig. No. 2396 Same as above with three dimmers ...\$200.00

MOTOR OPERATED DIMMERS

arranged for any number of circuits of any wattage.

Prices on application.

Fig No. 2398
PATENT PENDING

ALUMINIDE WINDOW LIGHTING UNIT

ALUMINIDE enters the window lighting field by way of the unit illustrated. ALUMINIDE has already proven its efficiency in the theatre lighting field and is replacing equipment in all the largest moving picture and legitimate theatres. Owing to its makeup and finish, this reflector will outlast any other. Its reflecting qualities are heightened by cleaning with white soap and water.

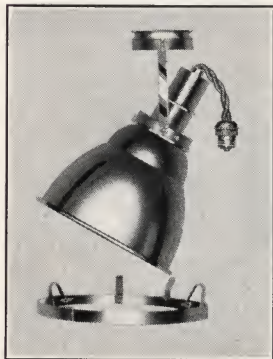


Fig. No. 4060

The reflector is designed to give maximum light with any lamp of a wattage from 10 to 200. This is made possible by the adjustable socket holder which permits the lowering of the socket for use of small lamps. It is 8 ins. in diameter arranged to fit a 2 1/4-in. shade holder, adjustable socket holder having embossed screw holders to take the yoke with which light is directed, and a collar which fits the regulation 3 1/4-in. shade holder. In this way, the unit can be attached to existing outlets. It is furnished with a short twisted cord and separable attachment plug. Reflector edge is beaded to take the color frame which is made in two sections with spring clips to fasten to reflector.

Fig. No. 4060 ALUMINIDE Window Lighting Unit with yoke, 8 ft. cord and separable attachment plug\$7.50

Fig. No. 4061 Color Frame for same.....\$1.50



FASHION SHOWS

and

PAGEANTS

FASHION shows, pageants, expositions and exhibits, while closely related to productions in the theatre, have a technique of their own, due to the different conditions under which they are produced, which makes actual experience necessary to the lighting expert who succeeds in this field.

Our standard equipment units as shown in this catalog, being simple to install, easy to operate and flexible in adjustment, are especially suited to the purpose, and give the widest possible range of effects.

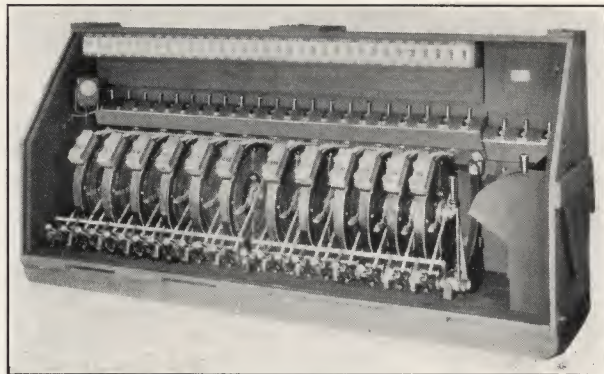
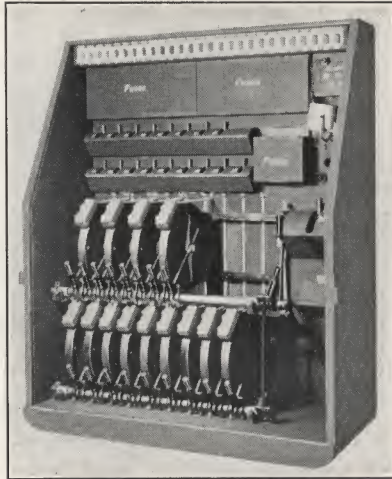
Touching on a few of the high points wherein out-of-the-ordinary results were obtained, from both spectacular and realistic view points, we are pleased to list such affairs as the International Silk Show (Grand Central Palace, N. Y.) 1921-1923; International Fur Show (Madison Square Garden, N. Y.) 1923; Men's Style Show (Madison Square Garden, N. Y.) 1923; Baltimore Fashion Show (Pimlico Race Track and 5th Regt. Armory, Baltimore) July-Aug., 1922; Lighting of the Lincoln Memorial, Washington, D. C. (On the occasion of the presentation of gold medal by President Harding to Henry Bacon, F. A. I. A.); pageant at Canisius College (Buffalo, N. Y.) July, 1923. Receptions in honor of His Majesty, The Prince of Wales, at the homes of Clarence Mackay at Roslyn, L. I., and Mrs. W. K. Vanderbilt at Jericho, L. I.; Congress of American Industry at Philadelphia, Pa.; Christmas Toyland Pageant at L. Bamberger & Co. (department store), Newark, N. J.; America's Making Exposition (71st Regt. Armory, N. Y.); National Electric Lighting Assn. (Hotel Commodore, N. Y.) 1923; Actors Equity May Day Party and Balls in New York and Chicago, which pre-eminently qualifies us to direct distinctive and unusual lighting for the most pretentious productions.

Society of Beaux Arts Architects' Ball (annual, at Astor Hotel, N. Y. C.) is probably the most elaborate and artistically beautiful affair of its kind in America. The Society, always original in ideas, are most exactly critical of lighting effects, and for the last three years have relied upon Display Stage Lighting Co., Inc., to carry out their most fantastic schemes of lighting.

In the solving of any lighting problem, whether it involves the use of one light or hundreds, we are always glad to give expert advice as to choice and disposition of equipment, lay out complete lighting schemes, or devise ways to produce any effect, giving personal supervision for installation and presentation. Estimates on request.

PORTABLE SWITCHBOARD DIMMER BOXES

Portable Switchboard Dimmer Boxes are used by traveling attractions for controlling their lighting equipment, or as an auxiliary to inadequate installations in small theatres, or on outdoor stages, or other occasions where a temporary switchboard is required. In fact, most traveling



companies carry their own switchboards. This enables them to produce the same lighting effects wherever they go, in most cases the entire lighting equipment being controlled from the Portable Switchboard Dimmer Box by the company electrician.

PORTABLE SWITCHBOARD DIMMER BOXES

Portable Switchboard Dimmer Boxes are built of wood, lined throughout with metal, and mounted on casters. Switches, cut-offs and all live parts are completely metal covered, leaving only control handles exposed. They are built in one or more sections, depending on amount of equipment to be controlled.

Each circuit is controlled by a switch, though in some cases several circuits may be controlled by the same switch, each circuit having cut-out fused to required capacity. Either pocket or connector outlets are used, depending on amperage of circuit. This facilitates quick connections. All Switchboards are provided with fused main switch of proper capacity, and with flexible Stage Cable of any desired length, either two or three conductor, for feed.

Dimmers are banked and installed in bottom of box in any and as many combinations as desired, either interlocking or non-interlocking. In case of interlocking, a master lever permits control either individually or collectively. Dimmers may be used on each circuit, or several circuits may be controlled on one.

Switchboard Dimmer Boxes operate equally well on direct or alternating current.

On receipt of the following information we will be glad to estimate on your requirements, with detailed description and prices:—

Number of circuits and capacity required.

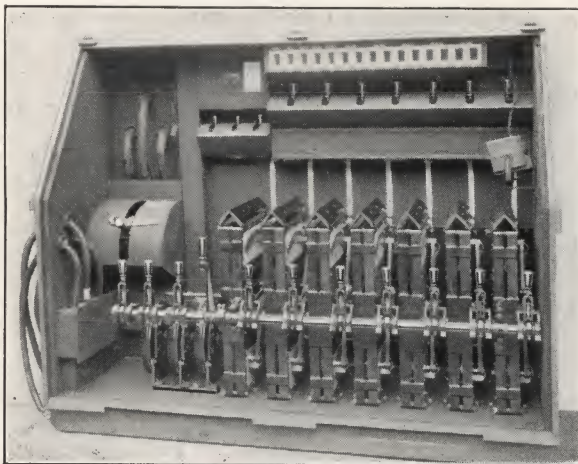
Number of circuits to be controlled by Dimmers.

Number of outlets on each circuit.

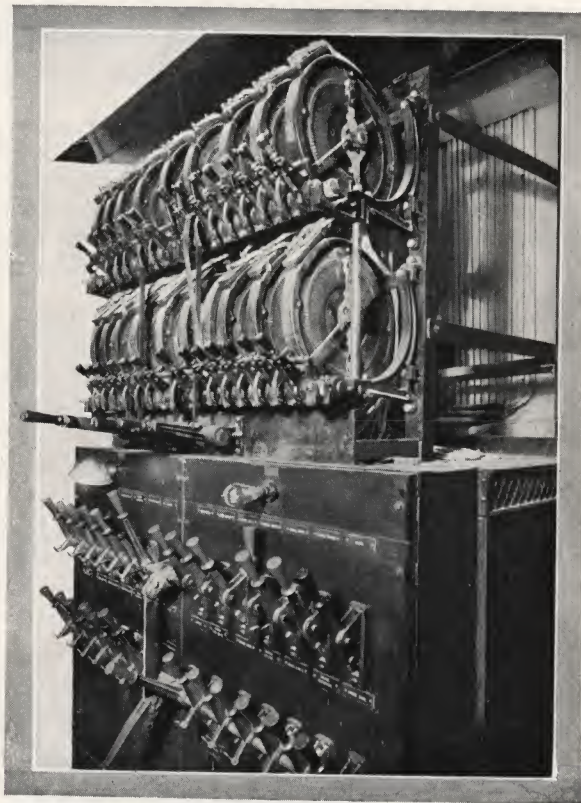
Whether Dimmers are to be interlocking or non-interlocking.

Whether Switchboards are to be wired for 2 or 3 circuits.

(We recommend 3-wire circuits at all times.)



DEADFRONT SWITCHBOARDS, complying with all requirements of the City and Underwriters, can be furnished for all purposes. On receipt of detailed information covering your requirements, we shall be pleased to quote.



Dimmers and Deadfront Switchboard

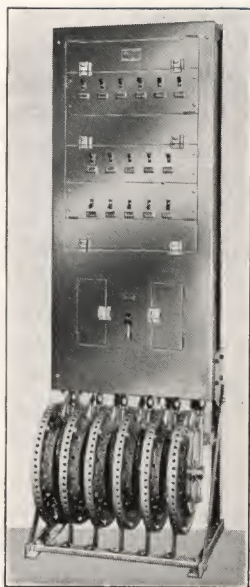
DIMMERS

Proper lighting effects have always been one of the essential features of dramatic productions. Even the savages waited for the weird lighting of the moon to hold their most impressive ceremonies. From the earliest miracle plays down to the present day miraculous presentations, the appeal to the eye has been considered an important factor in the theatre.

The effect on the audience wrought by shifting color harmonies of light on stage and auditorium is of tremendous power. Accentuating the mood of story or music, these changes of light and color carry the audience on a veritable magic carpet to the "land of make-believe".

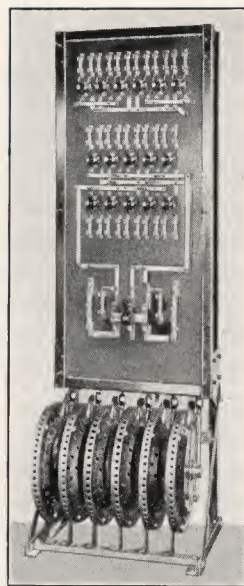
Modern lighting equipment and control has given theatre men of today powerful instruments by which they secure just the effects desired.

The lighting effects and variations made possible by thoroughly modern theatre dimmer equipment are practically limitless. Both stage and auditorium illumination may be controlled at will from a single point—the proper blending, brightening and dimming being available for every change of scene. With each successive number the house may be bathed in whatever glow will best accentuate the mood.



SWITCHBOARD

The decorative scheme of the theatre may actually be changed to be never twice alike throughout the performance — yet always a marvel of delicate beauty. Hundreds of colored bulbs at every possible vantage point in the theatre can be perfectly controlled to create any impression from the palest moonrise to the hot glare of the Sicilian midnoon.



INDIVIDUAL TYPE DIMMERS OPERATE ON AC OR DC

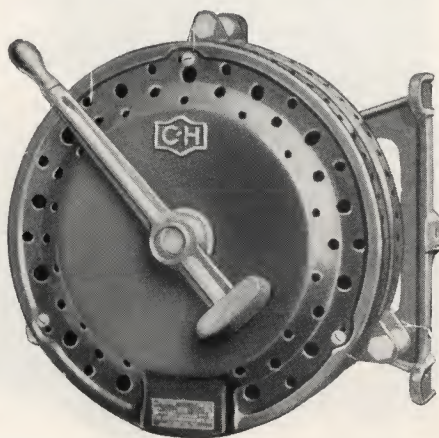
The so-called individual type of dimmer, as the name implies, is a complete unit in itself.

It consists of one or more plates operated by one handle. Each plate is provided with a ventilated enclosing cover over the contact side preventing accidental contact with live parts.

The standard design is provided for mounting flat against a switchboard but edgewise mounting brackets can be provided for mounting at right angles to a wall or switchboard. This method of mounting is particularly suitable when two or more dimmers are required. Greatest convenience of operation is afforded.

Handwheel type accessories can be provided when it is desirable to mount the dimmers at the rear of a switchboard or wall, or in an enclosure (see page 86). When enclosed, proper ventilation must be provided in the form of openings at both top and bottom of the enclosure. The total opening should amount to at least one square inch, for each 200 watts in lamps connected to the Dimmer, at both bottom and top.

The resistors consist of reflexed wire firmly secured to the contact without solder, and securely anchored to the composition base before cemented in place. The windings are distributed over the plate to provide uniform heating and maximum dissipating capacity.





STANDARD THEATRE DIMMERS

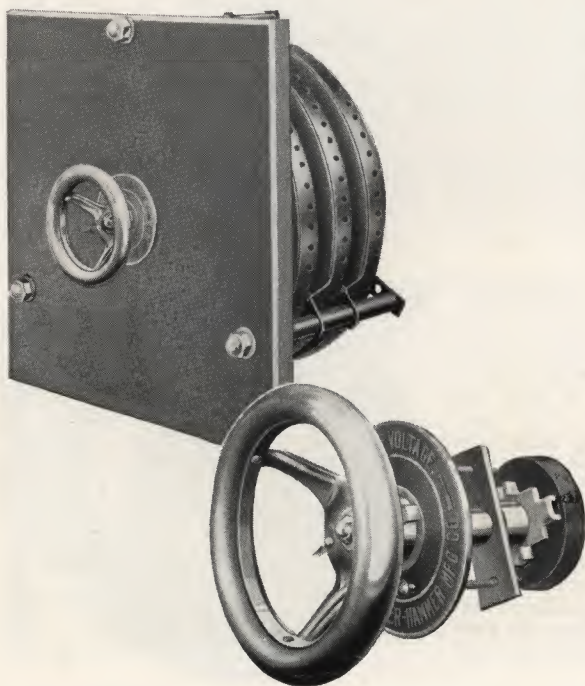
These dimmers are standard equipment for proper lighting control considered essential for modern theatres, lodge rooms, auditoriums, etc. It is possible to bank any number of dimmer plates either interlocking or non-interlocking, with master lever, grand master, or slow motion drive wheels. Indicators are provided designating the circuit and the brilliancy for which any dimmer is set. Any number of circuits can be controlled, both individually or in desired combinations.

The dimmers are banked in the most convenient arrangements, providing greatest ease of control. Thus, the dimmers which control all the foots may be arranged in the first vertical row of dimmer plates, while all the white lights are in the first horizontal row. Next, in the vertical row, comes the border lights, and in the horizontal row the blue lights, and so on—with as many vertical rows as there are groups of lights in the house, and as many horizontal rows as there are colors.

All foot lights being together in a vertical row, it is very easy to control the volume of light desired from any particular color of lamp in that group. The dimmers provide means of so interlocking the lights,

that by moving one master control lever, the lights on one circuit may be dimmed and those on another brightened. At the same time the colors of any circuit are likewise dimmed or brightened.

For instance, it may be desired during a scene to dim the white lights in the foots to a combination of amber and blue, with blue predominating; and to change the border lights from a combination of red and green, with green predominating, to a combination of blue and white, with white predominating. This is all done by quickly

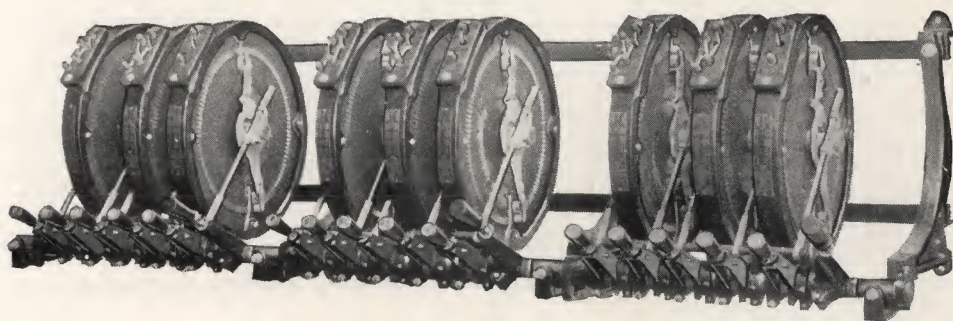


STANDARD THEATRE DIMMERS

setting the individual control handles for each bank of lights and then moving the master control. The effect is one of gradual blending of colors from the previous set-up to the one desired. The dimmer plates are made in the single-sided and double-sided type. The single-sided type has one winding for a maximum of 3000 watts. The double-sided plate has a winding on each side providing a maximum total load of 3600 watts or two separate loads of 1800 watts, permitting individual operation of each of the two loads. Each winding has 110 steps of resistance, giving smooth, velvet-like control. The plates have soap-stone bases with the resistance wire reflexed and cemented in the base. The resistance windings are arranged to distribute the heat over the entire surface, giving maximum radiating area.

Our dimmers are designed for continuous, severe, long hour service to which moving picture houses in particular subject them. The construction and material of the dimmer resistance plates have the ability to withstand accidental or temporary abnormal loads, such as exists in theatre practice. All parts of a theatre dimmer are subjected to alternate heating and cooling. For this reason material which does not deteriorate through the temperature changes is used in making our dimmers.

The scientific combination of graphite and copper, known as cophite, of which the contact brushes are formed, combines the continuous lubricating qualities of graphite and the perfect commutating property of copper. The brush operates with less noise, less wear, and less friction than any material yet discovered for the purpose. The stationary contact buttons are of brass, ground to a smooth, even surface. They do not oxidize as copper, and thus minimize heating at the brushes. The pressure spring is located away from the dimmer plate and subjected to the least amount of heat.





ELECTRICAL DATA

2-Wire, 110 Volts; 3-Wire, 110-220 Volts—Single Dimmers

Total Wattage of Lamps	2-Wire		3-Wire	
	Type	Fig. No.	Type	Fig. No.
450	A	2350	B	2369
600		2351		2370
750		2352		2371
900		2353		2372
1200		2354		2373
1500		2355		2374
1800		2356		2375
2100		2357		2376
2400		2358		2377
2700		2359		2378
3000		2360	C	2379
3300		2361		2380
3600	B	2362		2381
4200	C	2363	2382	
4800		2364	2383	
5400		2365	2384	
6000		D	2385	
6600	2367		2386	
7200	E	2368	2387	

Total Wattage of Lamps	2-Wire		3-Wire	
	Type	Fig. No.	Type	Fig. No.
8100	F	2388	G	2395
9000		2389		2396
9600	G	2390	I	2397
10200	H	2391		2398
10800	I	2392	J	2399
12000		2393		2400
13200	J	2394		2401
Combination Dimmers				
450	K	2405	-----	-----
600		2406	-----	-----
750		2407	-----	-----
900		2408	-----	-----
1200		2409	-----	-----
1500		2410	-----	-----
1800	L	2411	-----	-----
4200		2412	-----	-----
4800		2413	-----	-----
5400		M	2414	-----

Fig. No.	Total Wattage in Lamps	Max. Amps.	Total Ohms	No. of Steps	No. and Size of Plates	Lbs. Boxed	List Price
110 Volts—2-Wire							
2300	200	1.75	200	24	1—10"	20	\$12.00
2301	360	3.15	110	24	1—10"	20	12.00
2302	500	4.4	80	24	1—10"	20	12.00
2303	660	5.7	60	40	1—12"	25	14.00
2304	900	7.8	44	40	1—12"	25	14.00
2305	1100	9.6	36	60	1—15"	30	17.00
2306	1320	11.5	30	60	1—15"	30	17.00
2307	1880	15.7	22	120	2—15"	60	31.00
2308	2200	19.1	18	120	2—15"	60	31.00
2309	2640	23.	15	120	2—15"	60	31.00
220 Volts—2-Wire							
2315	200	.87	800	24	1—10"	20	\$12.00
2316	360	1.56	450	24	1—10"	20	12.00
2317	500	2.2	320	24	1—10"	20	12.00
2318	660	2.9	240	40	1—12"	25	14.00
2319	900	3.9	180	40	1—12"	25	14.00
2320	1100	4.8	145	60	1—15"	30	17.00
2321	1320	5.8	121	60	1—15"	30	17.00
2322	1800	7.8	89	120	2—15"	60	31.00
2323	2200	9.6	73	120	2—15"	60	31.00
2324	2640	11.5	60	120	2—15"	60	31.00
110-220 Volts—3 Wire							
2330	400	1.75	200	24	2—10"	40	\$18.00
2331	720	3.15	110	24	2—10"	40	18.00
2332	1000	4.4	80	24	2—10"	40	18.00
2333	1320	5.7	60	40	2—12"	50	24.00
2334	1800	7.8	44	40	2—12"	50	24.00
2335	2200	9.6	36	60	2—15"	60	31.00
2336	2640	11.5	30	60	2—15"	60	31.00

* On the 110-220 volt, 3-wire system the data under "maximum amps.", and "total ohms," is given for one side only of a 3-wire circuit.

SINGLE PLATE DIMMERS

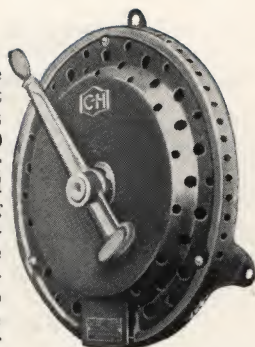
(Operate on either A. C. or D. C.)

A Single Plate Dimmer, having either single or double face, operated by a single lever controls metallic filament lamps up to a total of 2640 watts. Special dimmers of this

type can be furnished up to 5280 watts. Arranged for mounting either flat or edgewise against wall or switchboard with the operating lever in front. Plates have soapstone base with the resistance wire reflexed and cemented in base. Resistance windings are arranged to distribute heat over entire surface of plate for maximum radiating area.



Edgewise Mounting



Wall Mounting

Fig. No. 2432

TABLE OF PLATE SIZES

Size of Plates	No. of Plates	Dimensions in Inches					
		Wall Mounting			Edgewise Mounting		
		A	B	C	A	B	C
10"	1	11 1/8"	12 7/8"	5	13-13/16"	12 7/8"	7 3/4"
10"	2	11 1/8"	12 7/8"	8	12-13/16"	12 7/8"	10 3/4"
12"	1	12 7/8"	13 7/8"	5	13-11/16"	13 7/8"	7 3/4"
12"	2	12 7/8"	13 7/8"	8	13-11/16"	13 7/8"	10 3/4"
15"	1	15 5/8"	15 5/8"	5	16-9/16"	15 5/8"	7 3/4"
15"	2	15 5/8"	15 5/8"	8	16-9/16"	15 5/8"	10 3/4"

METHODS OF MOUNTING

Six popular methods of mounting are shown by the below cross section views. Figures 1, 2 and 6 are the least expensive, applying to small banks of plates which can be mounted in one row. Installations requiring large banks may necessitate mounting plates in two or more rows and also mounting of the levers in two or more rows. The exact design depends usually upon the size of the bank, number of colors, space available. In general, dimmer banks are mounted above the switchboard and all except Figure 2 construction are suitable for such mounting.

Length Along Lever Shaft in Inches
Type of Dimmer

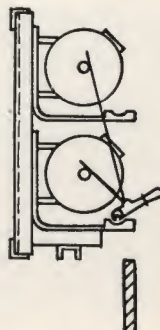
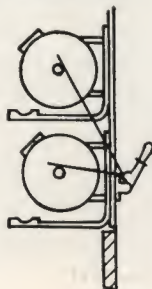
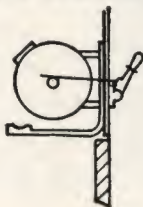
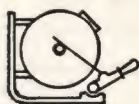
A	B	C	D	E	F	G	H	I	J	K	L	M
4 7/8	4 1/2	7 7/8	7 7/8	8 3/4	11 1/8	11 3/4	11 3/4	15 5/8	15 5/8	6 1/4	13	13 1/4

This table gives the approximate distance along the operating shaft required by the various types of dimmers and enables one to reach a rough approximation of the total length of a bank containing a number of dimmers of the several types.

As Dimmer equipment must be designed to fit individual needs, prices can only be given on complete details of installation.

State space available (area and height) and general condition, and a schedule of the wattage of the various lights to be controlled.

For Dimmers mounted in Portable Switch see pages 82 and 83.



FUSES

All fuses are of standard manufacture, accurate as to carrying capacity.

LINK FUSES—2½ INS. CENTER TO CENTER		CARTRIDGE FUSES N. E. C. Standard	
10 to 30 ampere, each.....	\$0.06	10 to 30 ampere, each.....	\$0.10
30 to 60 ampere, each.....	.08	40 to 60 ampere, each.....	.15
100 ampere, each.....	.15	60 ampere, each.....	.55
		100 ampere, knife end type, each..	.55
		125 ampere, knife end type, each..	1.00
		200 ampere, knife end type, each..	1.60
PLUG FUSES			
10 to 30 ampere, each.....	\$0.07		

STAGE FLOOR POCKETS

Approved by the Underwriters Laboratories, Inc.

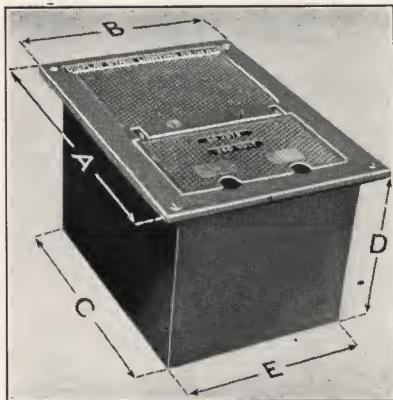
Display Stage Floor Pockets are made in 1, 2, 3, and 4 outlets and allow the rapid connection of lighting units for temporary use. They are placed in the floor of the stage at convenient points. Pockets are made of cast iron with a separate sheet iron box, and have knockouts for conduit at the back and bottom. A self-closing iron door fitting flush with the floor has notches for the cables running to Lights, so that cover is closed at all times.

The Porcelain Receptacles are set in cast iron frames and properly installed. Standard Display Stage Plugs are furnished with pockets.

Where pockets are specified arc and incandescent, non-interchangeable plugs are supplied.

Dimensions of Pockets:

	A	B	C	D	E
One Gang 13"	6⅞"	11⅜"	7¾"	5⅝"	
Two Gang 13"	9⅝"	11⅜"	7¾"	8¼"	
Three Gang 13"	12½"	11⅜"	7¾"	11"	
Four Gang 13"	19⅝"	11⅜"	7¾"	17⅞"	



Stage Floor Pocket Closed



Stage Floor Pocket Open

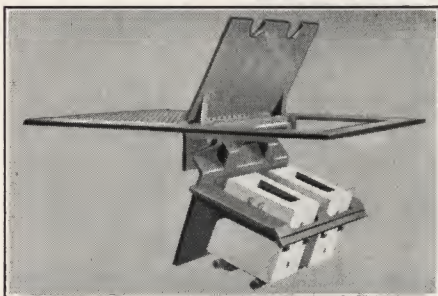


Fig. No. 2572

Rated 60 Amperes 2-Wire 250 Volts

Fig. No. 2571	1 Outlet Stage Floor Pocket and Plug	\$10.00
Fig. No. 2572	2 Outlet Stage Floor Pocket and Plugs	\$20.00
Fig. No. 2573	3 Outlet Stage Floor Pocket and Plugs	\$30.00
Fig. No. 2574	4 Outlet Stage Floor Pocket and Plugs	\$40.00

SPECIAL DIMMERS 300-600-1000 WATTS

Operate on either AC or DC for 115-Volt Spot Light Service

The design of these dimmers is basically identical with the standard individual type dimmers. They employ the same composition base noted for its insulating properties, lightness, and ability to withstand vibration and rough handling. The winding and commutating mechanism is ingeniously arranged to provide most advantageous heat distribution and maximum refinement of control. The design also provides an "Off Point" opening the circuit through four breaks in series, overcoming the objection to severe arcing.

Fig. No.	Rating Watts	Size	Weight	Price
2430	300	12 inches	10	\$16.00
2431	600	12 inches	10	18.50
2432	1000	12 inches	10	22.50

PLUGGING BOXES

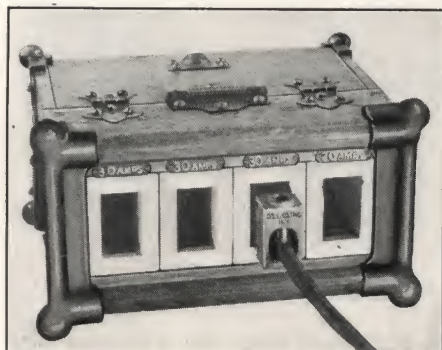


Fig. No. 2502

Plugging Boxes are easily portable and may be placed where desired. They permit the connection of from 2 to 8 circuits to one feed cable independently of the permanent theatre pockets. They serve as a junction box for many cables which would ordinarily run distances to panels or house pockets of which there are seldom sufficient.

Plugging Boxes are of heavy wood construction, lined throughout with asbestos, reinforced with malleable corner irons that protect hinges and wood box to withstand constant and hard usage.

Wiring of plugging boxes is made to a slate panel and arranged so that fuses are readily accessible through spring hinged doors at top and bottom of box. Each receptacle is fused independently. Feed cable enters in back opposite receptacles.

Bus bars in all plugging boxes are arranged with clips for cartridge fuses, to take up to 30 amperes.

Plugging Boxes accommodate the standard Display Stage Plug.

2-Wire Main—2-Wire Outlets			3-Wire Main—2-Wire Outlets		
	Fig. No.	Price		Fig. No.	Price
2 Outlets	2500	\$ 9.00		2508	\$10.00
4 Outlets	2501	17.00		2509	19.00
6 Outlets	2502	25.50		2510	28.50
8 Outlets	2503	34.00		2511	38.00
Plugs Extra.					

DISPLAY STAGE PLUGS

(Patent applied for)

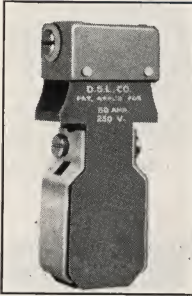


Fig. No. 2620

For making connections in Porcelain Receptacles, as in Switch-board Dimmer Boxes, Stage Floor Pockets, and Plugging Boxes. The Plug is constructed of solid fibre with heavy floating copper contacts, and copper terminals. 60-ampere capacity, 250-volt. The Display Stage Plug is constructed to meet all requirements and complies with all of the New York Board of Fire Underwriters' and City Department's rules.

Fig. No. 2620 Display Stage Plug, 60-ampere, 250-volt.....\$2.00

PORCELAIN RECEPTACLES

(60 amperes, 250 volts)

The Display Receptacle is constructed of porcelain with copper contact parts and lugs, and is used in Display Plugging Boxes, Switchboards, Dimmer Boxes, Floor Pockets and Wall Pockets.

Fig. No. 2565 Porcelain Receptacle\$2.00

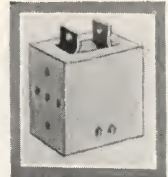


Fig. No. 2565

ENCLOSED SWITCHBOXES

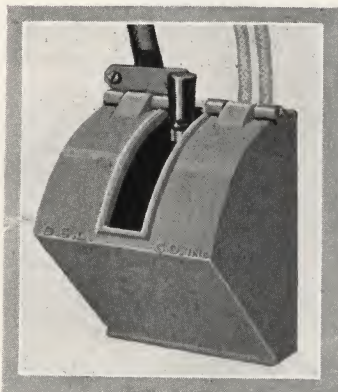


Fig. No. 2600

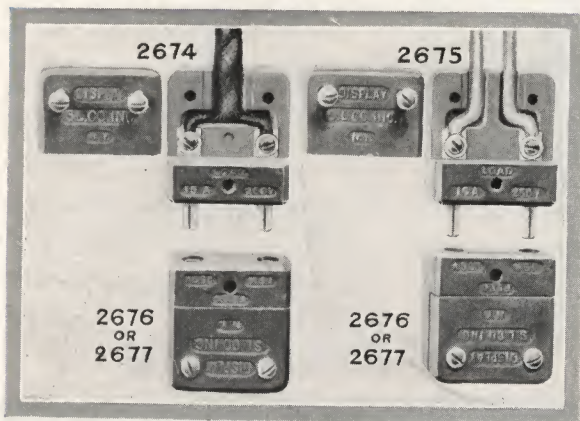
For use on Arc Spot Light, and wherever it is desired to place a switch on a pipe standard. Made in two sizes, 30-ampere and 60-ampere. A 30-ampere, 2-pole, single throw, non-fused switch is enclosed in a metal housing with only the handle protruding. This makes a dead-face switch which complies with all City Department and Underwriter requirements. The cover is hinged, giving ready access to the switch. The arrangement for clamping to pipe standard is simple and allows Switchbox to be quickly moved. The 60-ampere Switchbox is larger, and same design as 30-ampere.

Fig. No. 2600 30-ampere metal Switchbox complete\$5.00

Fig. No. 2610 60-ampere metal Switchbox complete 7.50

DISPLAY STAGE CONNECTORS

Approved by the Underwriters' Laboratories, Inc.



Display Stage Connectors are generally used on all stage lighting units, in garages, hotels, for connecting fixtures, etc., as they permit quick connections and are convenient to handle. Constructed of a moulded composition, moisture and acid proof, and arranged that binding screws and connections are completely covered. In use, the circuit is completed by two split brass pins in the male block of the Connector, fitting into brass sleeves in the female block, the split in the pins acting as a spring to tightly grip the sides of the sleeves.

Connectors are usually provided with one cable opening in the female end and two openings in the male for two wires unless otherwise specified.

Order the combination desired by number.

		MALE	FEMALE	EACH
Fig. No. 2650	5-ampere Connector	cable	cable.....	\$1.10
Fig. No. 2651	5-ampere Connector	asbestos	asbestos.....	1.10
Fig. No. 2652	5-ampere Connector	asbestos	asbestos.....	1.10
Fig. No. 2653	5-ampere Connector	asbestos	cable.....	1.10
Fig. No. 2654	5-ampere Connector	male part only	cable.....	.55
Fig. No. 2655	5-ampere Connector	male part only	asbestos.....	.55
Fig. No. 2656	5-ampere Connector	female part only	cable.....	.55
Fig. No. 2657	5-ampere Connector	female part only	asbestos.....	.55
		MALE	FEMALE	EACH
Fig. No. 2670	15-ampere Connector	cable	cable.....	\$1.50
Fig. No. 2671	15-ampere Connector	cable	asbestos.....	1.50
Fig. No. 2672	15-ampere Connector	asbestos	asbestos.....	1.50
Fig. No. 2673	15-ampere Connector	asbestos	cable.....	1.50
Fig. No. 2674	15-ampere Connector	male part only	cable.....	.75
Fig. No. 2675	15-ampere Connector	male part only	asbestos.....	.75
Fig. No. 2676	15-ampere Connector	female part only	cable.....	.75
Fig. No. 2677	15-ampere Connector	female part only	asbestos.....	.75

DISPLAY MULTIPLE ADAPTER

(Patent applied for)

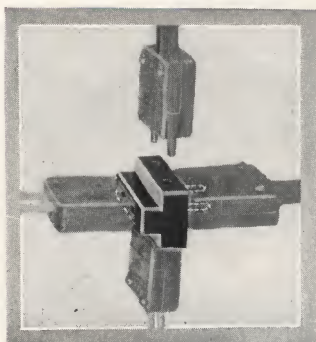


Fig. No. 2640

Display Multiple Adapter instantly converts a 15-ampere female into three 5-ampere female outlets without wiring.

In use it feeds from the female half of our 15-ampere Connector with up to three 5-ampere male connector parts for the outlets. Convenient for connecting several small circuits.

Fig. No. 2640 Multiple Adapter; complete with one 15-ampere and three 5-ampere male Connector parts\$3.50

Fig. No. 2641 Multiple Adapter only (without Connector parts)\$1.25

STAGE CABLE



The highest quality Stage Cable approved and meeting all City Department requirements. Strongly constructed for hardest usage and has high degree of flexibility.

2-CONDUCTOR FLEXIBLE STAGE CABLE

Carrying Capacity			Price per 100 ft.	Carrying Capacity			Price per 100 ft.
No. 18	3	Amperes	\$ 4.00	No. 6	50	Amperes	\$25.00
No. 16	6	"	5.00	No. 4	70	"	32.00
No. 14	15	"	6.50	No. 2	90	"	47.50
No. 12	20	"	9.00	No. 1	100	"	62.00
No. 10	25	"	12.00	No. 0	125	"	67.50
No. 8	35	"	17.00	No. 00	150	"	87.50

3-CONDUCTOR FLEXIBLE STAGE CABLE

Carrying Capacity			Price per 100 ft.	Carrying Capacity			Price per 100 ft.
No. 4	140	Amperes	\$ 50.00	No. 1	200	Amperes	\$85.00
	No. 00	300 Amperes					\$135.00

ALL HARD RUBBER SERVICE CABLE

Heavy Duty

Approved by Underwriters' Laboratories, Inc.

Two or more conductors rubber covered and distinctively braided, twisted together and covered with a heavy wall of high grade rubber. Extremely flexible and waterproof.

2-CONDUCTOR

No.	Carrying capacity	Price per 100 feet
18	3 Amperes	\$ 8.00
16	6 Amperes	8.50
14	15 Amperes	12.00
12	20 Amperes	13.50

3-CONDUCTOR

No.	Carrying capacity	Price per 100 feet
18	3 Amperes	\$10.00
16	6 Amperes	11.50
14	15 Amperes	14.50
12	20 Amperes	17.00



ASBESTOS COVERED CABLE

(Asbestos Moving Picture Cord)

Approved by Underwriters' Laboratories, Inc.

Best Quality Asbestos Cable, combining great flexibility with toughness.
Single Conductor Stranded Flexible Asbestos Covered Wire

Carrying Capacity Price per 100 ft.			Carrying Capacity Price per 100 ft.		
No. 14	20 Amperes	\$ 7.00	No. 4	90 Amperes	\$24.00
No. 12	25 "	8.50	No. 2	125 "	31.00
No. 10	30 "	10.00	No. 1	150 "	On Application
No. 8	50 "	12.00	No. 0	200 "	On Application
No. 6	70 "	15.50	No. 00	225 "	On Application

BORDER LIGHT CABLE

The following sizes are carried in stock. Other sizes on order; prices and delivery on application.

Price per 100 ft.			Price per 100 ft.		
No. 12	3 Conductor	\$16.00	No. 12	6 Conductor	\$33.00
No. 12	4 "	22.00	No. 12	8 "	44.00
No. 12 12 Conductor			\$66.00		

LUGS

SOLDERLESS PINCH OR CLAMP LUG, approved type, designed to hold bare wire fast as well as crimping over the insulation of the wire.

Fig. No. 2770 Pinch Lug, holding up to No. 8 wire, each.....10c

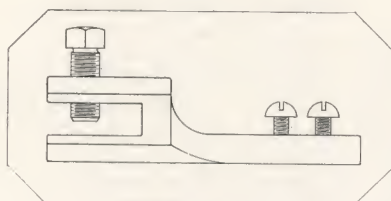


Fig. No. 2782

BUS BAR LUG

2 3/4 -in. 250 amps. \$1.25



Fig. No. 2775

SOLDER LUG, approved type, round end seamless Lug. Closed end prevents leaking of solder and gives better conductivity.

	Size	Amperage	Maximum Wire Size	Price
Fig. No. 2775.....	1/4-in.	35	8	\$0.05
Fig. No. 2776.....	3/8-in.	70	4	.07
Fig. No. 2777.....	1/2-in.	125	0	.14
Fig. No. 2778.....	11/16-in.	225	0000	.22
Fig. No. 2779.....	13/16-in.	237	250.000 CM	.36

RHEOSTATS

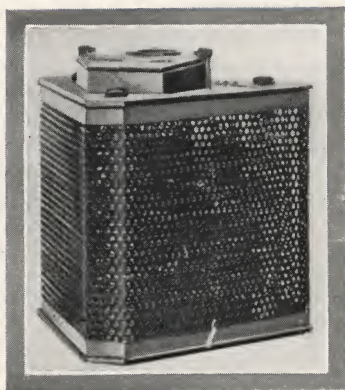


Fig. No. 2476

A Rheostat is a fixed resistance used in connection with an Arc Light. Consists of resistance wire wound on porcelain cores and mounted in a ventilated metal case which is arranged to fit on pipe standard of Spot Lights. The Rheostat is wired in series with the Arc Burner and reduces the voltage of the arc. All parts of Rheostat are carefully insulated. For general Spot Light use of the 40-ampere Rheostat is recommended.

Fig. No. 2473	25-ampere 120-volt	\$12.00
Fig. No. 2476	40-ampere 120-volt	16.00
Fig. No. 2477	50-ampere 120-volt	16.00
Fig. No. 2478	70-ampere 120-volt	40.00
Fig. No. 2486	Rheostat terminals with screws and washers	\$0.75

CARBONS FOR ARC LIGHTS

OROTIP (SILVERTIP) CARBONS



		Per C
5/16 x 6 ins.	Solid	\$6.90
3/8 x 6 ins.	Cored	7.55
3/8 x 6 ins.	Solid	7.38
7/16 x 6 ins.	Cored	8.42
1/2 x 6 ins.	Cored	9.15
5/8 x 6 ins.	Cored	13.80

PROJECTOR CARBONS

1/2 x 6 ins.	Cored	\$4.00
1/2 x 12 ins.	Cored	7.74
5/8 x 6 ins.	Cored	5.28
5/8 x 12 ins.	Cored	10.35
3/4 x 6 ins.	Cored	6.75
3/4 x 12 ins.	Cored	13.38
7/8 x 12 ins.	Cored	17.75
1 x 12 ins.	Cored	22.68

WITH FLAME PHOTOGRAPHIC CARBONS

		Per C
1/2 x 6 ins.	W.F. Cored	\$8.08
1/2 x 6 ins.	W.F. Cored Copper Coated	8.58
1/2 x 12 ins.	W.F.	9.25
1/2 x 12 ins.	W.F. Silvertip	9.77
5/8 x 6 ins.	W.F. Cored Projector	7.50
5/8 x 12 ins.	W.F.	13.65
5/8 x 12 ins.	W.F. Silvertip	14.50

CARBONS FOR USE WITH 150-AMPERE SPOT LIGHT

		Each
9/16 x 6 ins.	Silvertip	\$0.17
1 1/4 x 8 ins.	W.F.	.65

1000-WATT BURNER

Display 1000-Watt Burner for use in all Display Spot Lights rated at 500-1000 Watt and 1000-1500-2000 Watts.

The 1000-Watt Burner has an adjustment underneath the mogul socket which makes possible the centralizing of the lamp filament with lens. A spherical mirror reflector is used which increases the light concentration approximately 90%. This mirror is mounted with vertical and horizontal adjustments which allow the mirror to be accurately focused for the greatest efficiency. Base of the Burner moves in a slide in bottom of Light hood for instantly focusing the size of spot.

Fig. No. 507	1000-Watt Burner, complete...	\$15.00
Fig. No. 720	250-Watt Burner for Focusing Baby Spot Light, complete.....	9.00
Fig. No. 925	Baby Hercules Burner, complete.....	4.00
Fig. No. 508A	Main carriage casting Burner, 1000-watt, 2-socket uprights, main mirror upright, focusing thumb screw.....	3.50
Fig. No. 513	Cross joint for 1000-Watt Burner, with 2 thumb screws $\frac{1}{2}$ x $\frac{10}{32}$	.65
Fig. No. 723	Medium Base Socket, for 250-Watt Focusing Baby Spot.....	.35
Fig. No. 510	Mogul socket, porcelain.....	1.00
Fig. No. 509	Mogul socket base casting.....	.50
Fig. No. 511	Mirror ring for reflector.....	1.00
Fig. No. 513A	Mirror yoke for reflector.....	1.25
Fig. No. 519	Mirror reflector, Mangin, $3\frac{3}{4}$ ins.	1.25

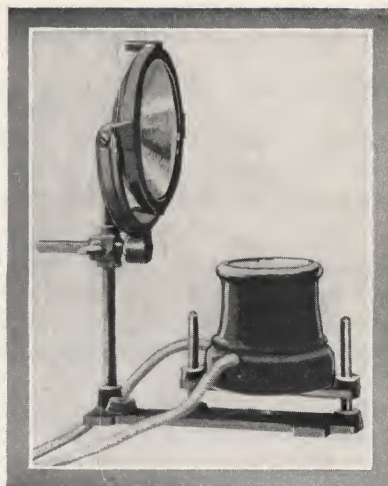


Fig. No. 507

ARC BURNER

Display Standard Arc Burner has many new features. For quick focusing, the burner moves in a slide controlled by a handle under the Light hood. It has an over-size non-binding screw feed, exceedingly strong, sure grip carbon holders having a centering device for raising and lowering of carbon holders, and provision is also made for forward and back adjustment. Arc Burner is mounted on parallel tracks which prevent disalignment or play of the carbon holders.

The carbon holder (grips) are made of cast iron, with high melting temperature screw for tightening carbon clamp clear of flame. Carbon holders will take carbons from $\frac{5}{16}$ in. to 1 in. in diameter.

The entire arc burner is designed so that all parts are free moving at all times.

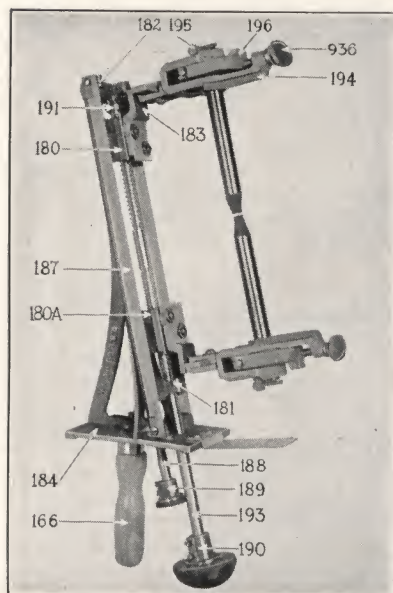


Fig. No. 141A

Fig. No. 150	Standard Arc Burner, complete.	\$25.00
Fig. No. 166	Focusing Handle	.50
Fig. No. 180	Carbon holder carriage—top... ..	.65
Fig. No. 180A	Carbon holder carriage—bottom	.65
Fig. No. 181	General adjustment guide.....	.75
Fig. No. 182	Track spacer	.75
Fig. No. 183	Carbon holder couplings (top and bottom)	.30
Fig. No. 184	Standard	6.00
Fig. No. 187	Tracks, each	1.00
Fig. No. 188	General adjustment stud.....	.40
Fig. No. 189	General adjustment knob.....	.50
Fig. No. 190	Carbon feed knob.....	.75
Fig. No. 191	Stop collar	.30
Fig. No. 193	Lead screw for carbon feed.....	2.75
Fig. No. 194	Carbon holder main body.....	2.50
Fig. No. 195	Carbon grip	.90
Fig. No. 196	Yoke	1.10
Fig. No. 197	Carbon holder—complete—(top and bottom)	7.00
Fig. No. 936	Thumb screw $1\frac{1}{2}$ x $\frac{5}{16}$ -18 thread.....	.15

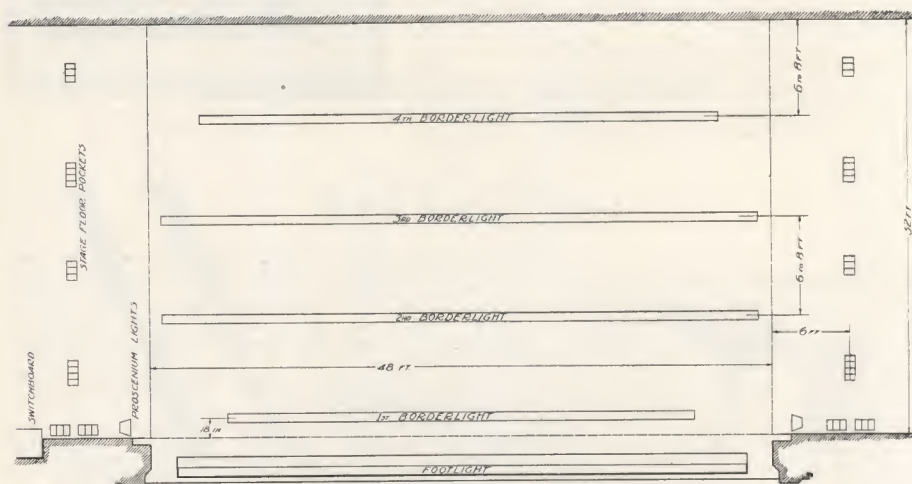


THEATRE WIRING DATA

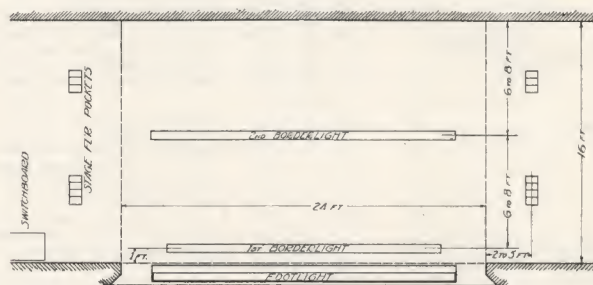
Compiled from the Electrical Code of City of New York
(Amended as of May 29, 1916)

PARAGRAPH 438. All wiring, apparatus, etc., not specifically covered by this section must conform to the general requirements of this chapter, and the term theatre shall mean a building, or that part of a building, regularly or frequently used for dramatic, operatic, moving picture or other performances or shows or which has a stage for such performances used with scenery or other appliances.

SERVICES. Where supply may be obtained from 2 separate street mains, 2 separate and distinct services must be installed, 1 service to be of sufficient capacity to supply current for the entire equipment of theatre, while the other service must be at least of sufficient capacity to supply current for all emergency lights. Where supply cannot be obtained from 2 separate sources, the feed for emergency lights

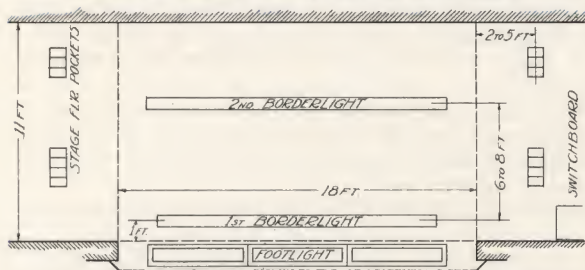


STAGE LIGHTING PLAN—LARGE SIZE THEATRE



STAGE LIGHTING PLAN—MEDIUM SIZE THEATRE

THEATRE WIRING DATA



STAGE LIGHTING PLAN—SCHOOL OR SMALL HALL

must be taken from a point on the street side of main service fuses. By "emergency lights" are meant exit lights and all lights in lobbies, stairways, corridors and other portions of theatre to which the public have access, which are normally kept lighted during the performance.

STAGE. All permanent construction on stage side of proscenium wall, except as hereinafter provided, must be approved conduit or armored cable.

Switchboards must be of the dead front type and made of non-combustible, non-absorptive insulating material, plans of each board to be approved before installation. Dimmers must be dead when the switch controlling circuit of which dimmer forms a part is open.

Foot lights must be wired in approved conduit or armored cable, each lamp receptacle being enclosed within an approved outlet box, or the lamp receptacles may be mounted in an iron or steel box, metal to be of a thickness not less than No. 20 U. S. sheet metal gauge, treated to prevent oxidation, so constructed as to enclose all the wires and providing at least $\frac{1}{2}$ in. separation between the metal of the box and receptacle terminals; wires to be soldered to lugs of receptacles.

Foot lights must be so wired that no set of lamps requiring more than 1,320 watts nor more than 32 receptacles shall be dependent upon one cut-out.

BORDERS AND PROSCENIUM SIDE LIGHTS. Borders and proscenium side lights must be constructed of steel of a thickness not less than No. 20 U. S. sheet metal gauge, treated to prevent oxidation, be suitably stayed and supported, and so designed that flanges of reflectors will protect lamps.

Borders and proscenium side lights must be so wired that no set of lamps requiring more than 1,320 watts nor more than 32 receptacles shall be dependent upon 1 cut-out.

Borders and proscenium side lights must be wired in approved conduit or armored cable, each lamp receptacle to be enclosed within an approved outlet box, or the lamp receptacles may be mounted in an iron or steel box, metal to be of a thickness not less than No. 20 U. S. sheet metal gauge, treated to prevent oxidation, so constructed as to enclose all wires and providing at least $\frac{1}{2}$ in. separation between the metal of the box and receptacle terminals; the wires to be soldered to lugs of receptacles.

Borders and proscenium side lights must be provided with suitable guards to prevent scenery or other combustible material coming in contact with lamps.

Cables for borders must be of approved type and suitably supported; conduit construction must be used from switchboard to point where cables must be flexible to permit of the raising and lowering of border.

For the wiring of the border proper, wire with approved slow-burning insulation must be used.

Borders must be suitably suspended, and if a wire rope is used same must be insulated by at least 1 strain insulator inserted at the border.



Stage and gallery pockets must be of approved type, insulated from ground and controlled from switchboard, each receptacle to be not less than 35 amperes rating for arc lamps nor 15 amperes for incandescent lamps, and each receptacle to be wired to its full capacity. Arc pockets must be wired with wire not smaller than No. 6 B. & S. gauge and incandescent pockets with not less than No. 12 B. & S. gauge.

Plugs for arc and incandescent pockets must not be interchangeable.

Dressing rooms must be wired in approved conduit or armored cable.

All pendant lights must be equipped with approved reinforced cord, armored cable or steel armored flexible cord.

All lamps must be provided with approved guards which are sealed or locked in place.

PORTABLE EQUIPMENT. Arc lamps used for stage effects must conform to the following requirements:

1. Must be constructed entirely of metal of a thickness not less than No. 20 U. S. sheet metal gauge except where the use of approved insulating material is necessary.

2. Must be substantially constructed, and so designed as to provide for proper ventilation, and to prevent sparks being emitted from lamps when same are in operation, and mica must be used for frame insulation.

3. Front opening must be provided with a self-closing hinged door frame, in which wire gauze or glass must be inserted, except in case of lens lamps, where the front may be stationary, and a solid door be provided on back or side.

4. Must be so constructed that neither carbons nor live parts will be brought into contact with metal of hood during operation, and arc lamp frames and standards must be so installed and protected as to prevent the liability of their being grounded.

5. Switch on standard must be so constructed that accidental contact with any live portion of same will be impossible.

6. All stranded connections in lamps and at switch and rheostat must be provided with approved lugs.

7. Rheostats must be plainly marked with their rated capacity in volts and amperes, and, if mounted on standards, must be raised to a height of at least 3 ins. above floor. Resistance must be enclosed in a substantial and properly ventilated metal case which affords a clearance of at least 1 in. between case and resistance element.

8. A competent operator must be in charge of each arc lamp, except that 1 operator may have charge of 2 lamps when they are not more than 10 feet apart, and are so located that he can properly watch and care for both lamps.

Bunches must be substantially constructed of metal and must not contain any exposed wiring; cable feeding bunches must be bushed in an approved manner where passing through the metal, and must be properly secured to prevent any mechanical strain from coming on the connection.

Strips must be constructed of steel of a thickness not less than No. 20 U. S. sheet metal gauge, treated to prevent oxidation, and suitably stayed and supported and so designed that flanges will protect lamps. Cable must be bushed in a suitable manner where passing through the metal, and must be properly secured to prevent serious mechanical strain from coming on the connections. Strips must be wired in approved conduit or armored cable, each lamp receptacle being enclosed within an approved outlet box or the lamp receptacles may be mounted in an iron or steel box, metal to be of a thickness not less than No. 20 U. S. sheet metal gauge, treated to prevent oxidation, so constructed as to enclose all wires, the wires to be soldered to lugs of receptacles.

Portable plugging boxes must be so constructed that no current carrying part will be exposed, and each receptacle must be protected by approved fuses mounted



on slate or marble bases and enclosed in a fireproof cabinet equipped with self-closing doors. Each receptacle must be constructed to carry 30 amperes without undue heating, and the busbars must have a carrying capacity equivalent to the current required for the total number of receptacles, and approved lugs must be provided for the connection of the master cable.

Pin plug connectors must be of an approved type, so installed that the female part of plug will be on live end of cable, and must be so constructed that tension on the cable will not cause serious mechanical strain on the connections.

Portable conductors used from receptacles to arc lamps, bunches and other portable equipments must be approved stage cable, except that for the purpose of feeding a stand lamp under conditions where conductors are not liable to severe mechanical injury an approved reinforced cord may be used, provided cut-out designed to protect same is not fused over 10 amperes capacity.

Brackets used on scenery must be wired entirely on the inside, fixture stem must come through to the back of the scenery and end of stem be properly bushed. Fixtures must be securely fastened in place.

String or festooned light wiring must be of approved type, joints to be properly made, soldered and taped, and staggered where practicable.

Where lamps are used in lanterns or similar devices, approved guards must be employed.

SPECIAL ELECTRICAL EFFECTS. Where devices are used for producing special effects such as lightning, waterfalls, etc., the apparatus must be so constructed and located that flames, sparks, etc., resulting from the operation cannot come in contact with combustible material.

Auditorium wiring must be installed in approved conduit, metal moulding or armored cable. Where receptacles are used, they must be enclosed in approved boxes.

Exit lights must not have more than 1 set of fuses between same and service fuses. Exit lights and all lights in halls, corridors or any other part of the building used by audience, except the general auditorium lighting, must be fed independently of the stage lighting, and must be controlled only from the lobby or other convenient place in front of the house. All fuses must be enclosed in approved cabinets.

TABLE OF ALLOWABLE CARRYING CAPACITIES OF WIRES

B. & S. Gauge Number	Diameter of Solid Wire in Mils.	Area in Circular Mils.	Table A. Rubber Insulation Amps.	Table B. Other Insula- tion Amps.
18	40.3	1,624	3	5
16	50.8	2,583	6	10
14	64.1	4,107	15	20
12	80.8	6,530	20	25
10	101.9	10,380	25	30
8	128.5	16,510	35	50
6	162.0	26,250	50	70
5	181.9	33,100	55	80
4	204.3	41,740	70	90
3	229.4	52,630	80	100
2	257.6	66,370	90	125
1	289.3	83,690	100	150
0	325.	105,500	125	200
00	364.8	133,100	150	225
000	409.6	167,800	175	275
		200,000	200	300
0000	460.	211,600	225	325

(1 Mil. = 0.001 inch)

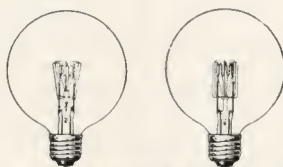


PRICE SCHEDULE OF LAMPS

(Prices Subject to Change Without Notice)

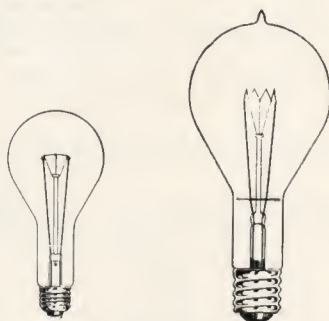
All Incandescent Lamps sold by Display Stage Lighting Co., Inc., are Association Lamps of standard quality and have been chosen for their fitness for their special uses.

Note: Lamps can also be furnished for 220 volts. Prices on request.



G SERIES

	Watts	Volts	Standard Package			Price
			Bulb	Quantity	Screw Base	
Fig. No. 2800	100	120	P-25	60	Medium	\$1.00
Fig. No. 2801	250	120	G-30	24	Medium	1.75
Fig. No. 2802	400	120	G-30	24	Medium	3.00
Fig. No. 2803	500	120	G-40	12	Mogul	3.25
Fig. No. 2804	1000	120	G-40	12	Mogul	6.75
Fig. No. 2805	1500	120	G-40	12	Mogul	9.00
Fig. No. 2806	1000	120	G-48	8	Mogul	8.50
Fig. No. 2807	2000	120	G-48	8	Mogul	13.00



P S SERIES

	Watts	Volts	Standard Package			Price
			Bulb	Quantity	Screw Base	
Fig. No. 2820	75	120	PS-22	60	Medium	\$0.45
Fig. No. 2821	100	120	PS-25	60	Medium	.50
Fig. No. 2822	150	120	PS-25	24	Medium	.60
Fig. No. 2823	200	120	PS-30	24	Medium	.80
Fig. No. 2824	300	120	PS-35	24	Mogul	1.25
Fig. No. 2825	500	120	PS-40	12	Mogul	2.00
Fig. No. 2826	750	120	PS-52	8	Mogul	3.75
Fig. No. 2827	1000	120	PS-52	8	Mogul	4.00
Fig. No. 2828	1500	120	PS-52	8	Mogul	5.50

PRICE SCHEDULE OF LAMPS

(Prices Subject to Change Without Notice)



A SERIES

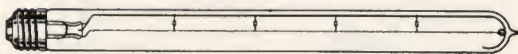
	Watts	Volts	Bulb	Standard Package		Price
				Quantity	Screw Base	
Fig. No. 2829	25	120	A-19	120	Medium	\$0.23
Fig. No. 2830	40	120	A-21	120	Medium	.23
Fig. No. 2831	50	120	A-21	120	Medium	.25
Fig. No. 2832	60	120	A-21	120	Medium	.25
Fig. No. 2833	100	120	A-23	60	Medium	.40

FROSTED

For general decorative use, house lighting, etc., where frosted globes are desirable.

	Watts	Volts	Bulb	Standard Package		Price
				Quantity	Screw Base	
Fig. No. 2860	25	120	G-18½	120	Medium	\$0.40
Fig. No. 2861	25	120	G-25	60	Medium	.50
Fig. No. 2862	40	120	G-25	60	Medium	.50

Supplied in Flametint, the price is 10c additional to the list price of frosted lamps.



T SERIES

For special uses, as in signs, piano lights, etc., where space is limited.

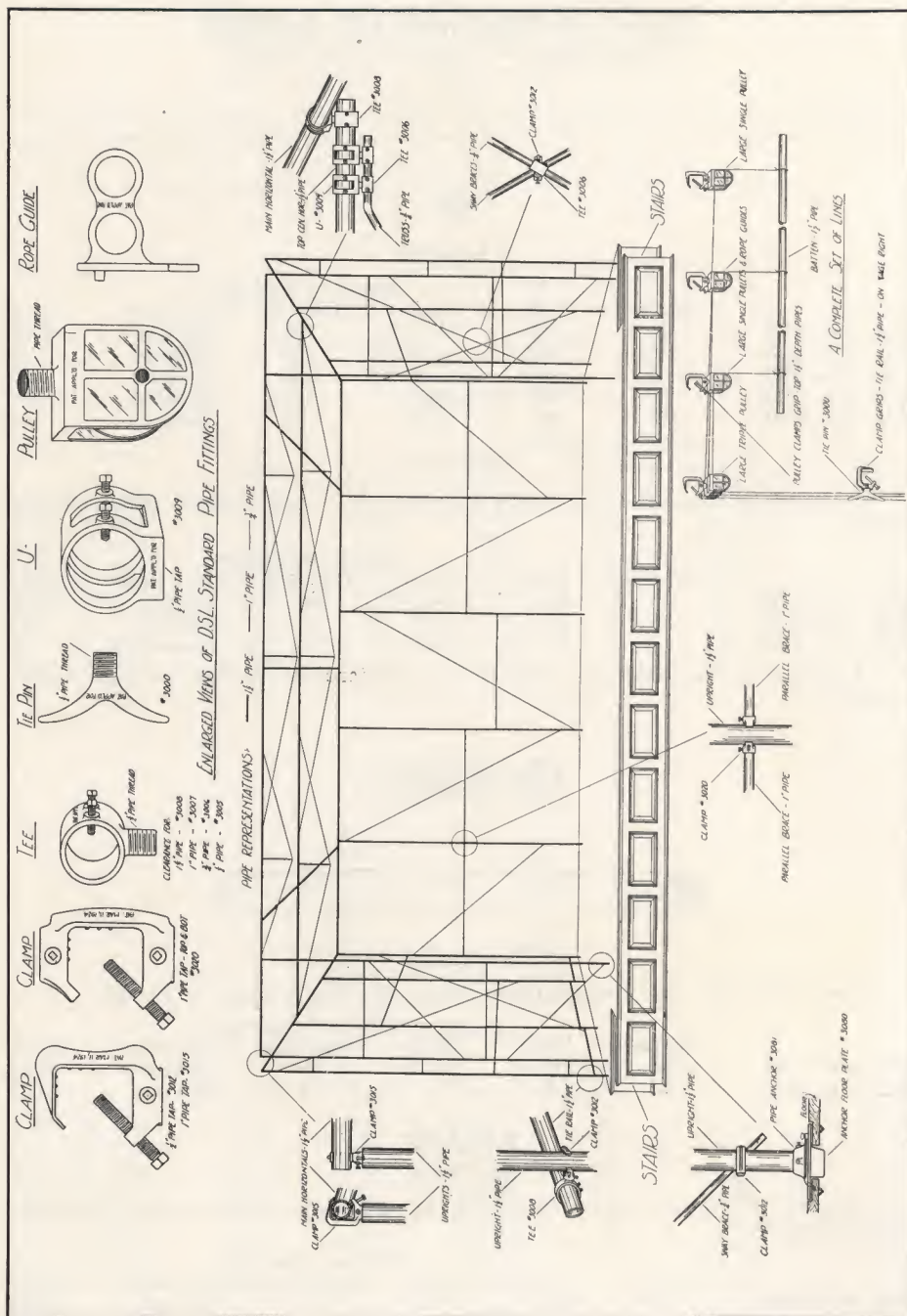
	Watts	Volts	Bulb	Standard Package		Price
				Quantity	Screw Base	
Fig. No. 2880	25	120	T-10	60	Medium	\$0.45
Fig. No. 2881	40	120	T-8	24	Medium	1.15

P SERIES

Mill Type

Rugged construction, recommended for factory use or where lamps must withstand vibration.

	Watts	Volts	Bulb	Standard Package		Price
				Quantity	Screw Base	
Fig. No. 2882	50	120	P-19	120	Medium	\$0.30



PORTABLE STAGE RIGGING

PARTS FOR PORTABLE STAGE



3012



3020



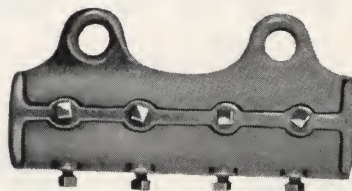
3009



3021



3011



3201



3000



3008



3080



3210



3211

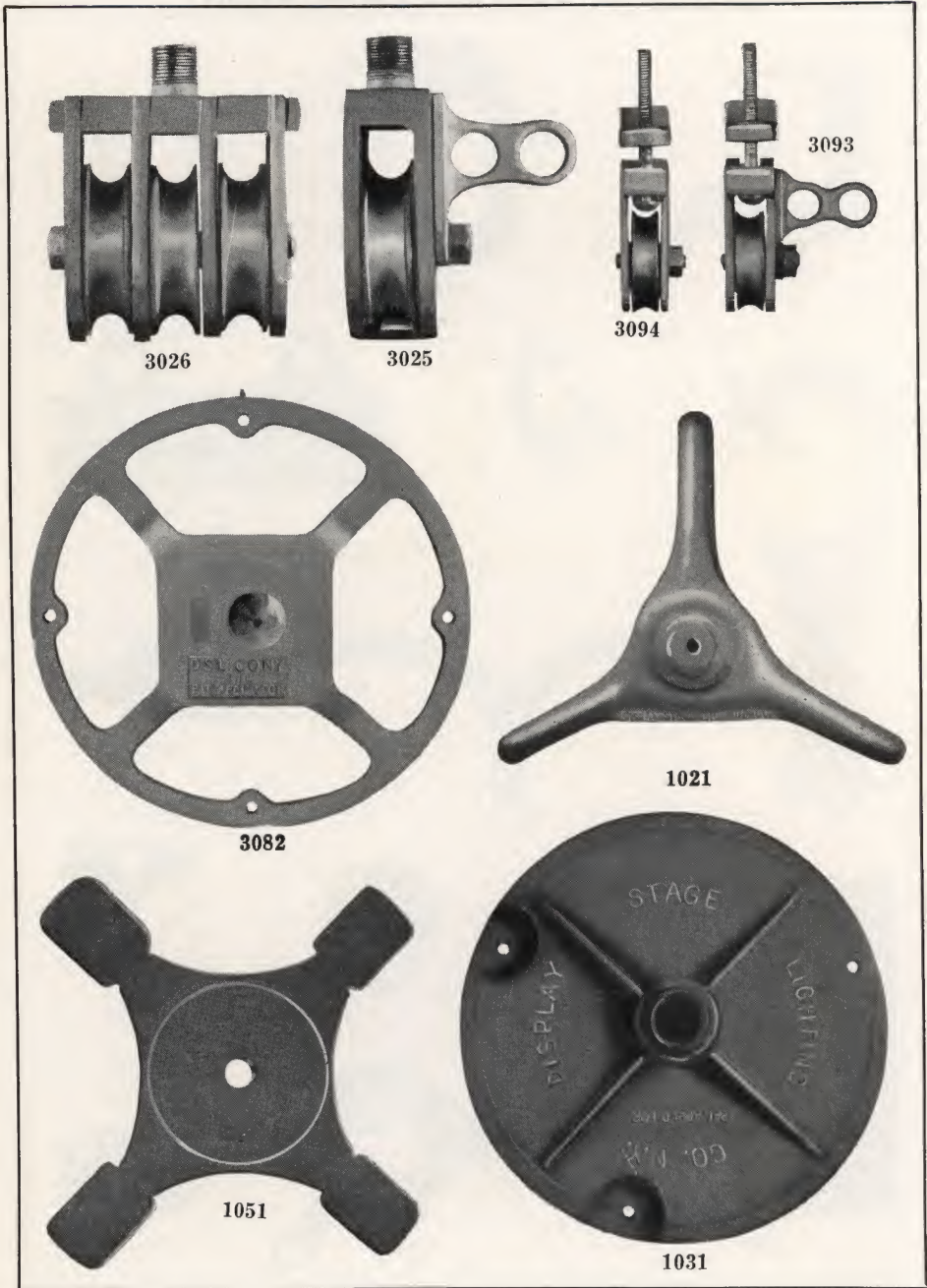


3081



3072

PARTS FOR PORTABLE STAGE



PARTS FOR REPLACEMENT



119



716



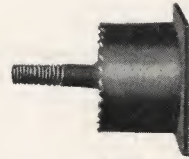
1008



117



1107



1296



118



1003



1004



715



3220



3222



3221



1025



3224



3223



1009



PARTS FOR REPLACEMENT

3081	Anchor, for 1½-in. pipe, with set screws ¾ x 5/16—18 thread.....	\$ 3.50
1050	Base, for Baby Hercules, 6-in. diam., tapped 10/32 machine screw.....	1.25
3082	Base, for 1½-in. pipe anchor, with thumb screws 1 x ¾—16 thread....	6.00
1051	Base, skeleton, with four iron ball bearing castors, tapped for 1½-in. pipe, 2 ft. square—weight 125 lbs.....	35.00
	Same with rubber castors.....	50.00
1052	Base, skeleton, with four iron ball bearing castors, tapped for 1½-in. pipe, 2 ft. 9 ins. square—weight 100 lbs. for 150-ampere spot.....	30.00
	Same with rubber castors.....	45.00
1031	Base for stand, 18-in. diam., tapped for 1½-in. pipe, offsets for fastening down—weight 35 lbs.....	5.50
1001	Base for stand, 14-in. diam., tapped for 1-in. pipe, offsets for fastening down—weight 19 lbs.....	3.50
1021	Base, Crowfoot, tapped for 1-inch pipe—weight 8 lbs.....	2.25
2126	Bracket for Music Stand, male and female parts.....	1.25
	(Burners, Arc and Nitrogen parts are listed on page 97.)	
108	Cover, aluminum, for asbestos wire on Spot hood.....	.50
1005	Cable Hook for stands.....	.25
174	Clamp for Cable and Asbestos Wires, 1-in. pipe, Arc Spot Stand.....	1.75
175	Clamp for Asbestos Wire, Arc Spot Stand, 1½-in. pipe.....	1.50
2531	Clamp for Cable, Plugging Box.....	1.75
3020	Clamp, grip up to 1½-in. pipe, both ends tapped for 1-inch pipe, set screws 2½ x ½ ins.—13 and ⅝ x 5/16 ins.—18.....	2.50
3021	Clamp assembly, two No. 3020, for fastening cross pipes.....	5.70
3012	Clamp, grips up to 1½-in. pipe, one end tapped for ½-in. pipe, set screws 2½ x ½ ins.—13 and ⅝ x 5/16 ins.—18.....	1.25
3015	Clamp, grips up to 1½-in. pipe, one end tapped for 1-in. pipe, set screws 2½ x ½ ins.—13 and ⅝ x 5/16 ins.—18.....	1.75
3014	Clamp, grips up to 1½-in. pipe, one end tapped for ¾-in. pipe, set screws 2½ x ½ ins.—13 and ⅝ x 5/16 ins.—18.....	1.50
3011	Clamp, grips ¼- to ¾-in. pipe, one end tapped for ½-in. pipe, set screws 1½ x ⅜ ins.—16 and ½ x ¼ ins.—20.....	1.00
109	Color Frame Holder for Arc and 1000-1500-watt Spot.....	.50
617	Color Frame Holder for 500-1000 watt Spot.....	.50
708	Color Frame Holder for 250-watt Focusing Baby Spot.....	.50
1007	Coupling ½-in.	.10
916	Color Frame Holder for Baby Hercules Spot.....	.50
917	Color Frame Holder for Baby Hercules Flood.....	.25
2529	Corner Iron, Front, for Plugging Boxes, each.....	.75
2530	Corner Iron, Back, for Plugging Boxes, each.....	1.00
3221	Coupling and Ell combination for ½-inch pipe, set screws ½ x ¼—20 thread.....	1.00
3222	Coupling for ½-in. pipe, set screws ½ x ¼—20 thread.....	1.00
3220	Coupling and Tee combination for ½-in. pipe, with set screws ½ x ¼ in.—20 thread.....	1.00
3201	Coupling clearance for 1-in. pipe, with set screws ⅝ x 5/16—18.....	3.75
3200	Coupling clearance for 1½-in. pipe, with set screws ⅝ x 5/16 ins.—18..	4.00
3203	Coupling clearance for ½-in. pipe, with set screws.....	3.25
3202	Coupling clearance for ¾-in. pipe, with set screws ⅝ x 5/16 ins.—18..	3.50
171	Following Handle for Spot Lights.....	1.00
3223	Flange, ½-in. pipe, set screws ½ x ¼—20 thread.....	1.00
3224	Flange, 1-in. pipe, with set screws ½ x ¼—20 thread.....	1.25
3080	Floor plate, for 1½-in. pipe anchor, with thumb screws 1 x ¾—16 thread	4.50
3210	Floor plate for stage peg, tapped ½-in.—13 thread.....	.50

117	Hand set wheel, ½-in.—13 thread.....	.35
1004	Hand screw for telescopic stands.....	.15
2528	Hinge, Spring, Japanned for Plugging Boxes.....	.25
129	Lens Reducer, 8 ins. to 6 ins.....	1.75
130	Lens Reducer, 6 ins. to 5 ins.....	1.00
1965	Lens Ring, spring, 3½ ins.....	.15
920	Lens Ring, spring, 4½ ins.....	.25
131	Lens Ring, spring, 5 ins.....	.25
122	Lens Ring, spring, 6 ins.....	.25
118	Leather Washer.....	.10
723	Medium base socket, for 250-watt Focusing Spot.....	.35
1150	Pipe Flange ½-in.....	.25
1002	Pipe, outer for Telescoping Stand, 1 in. x 4 ft.....	.75
1006	Pipe, inner for Telescoping Stand, ½ in. x 3 ft. 6 ins.....	.50
3211	Peg for stage floor, ½-in.—13 thread.....	.50
3026	Pulley, ⅞-inch rope, three gang, with stud having ¼-inch pipe thread.....	7.63
3025	Pulley, ⅞-in. rope, single wheel, with stud having ¾-in. pipe thread.....	4.75
3094	Pulley, ½-in. rope.....	2.50
1003	Reduction coupling, 1 in. to ½-in., with hand screws for stand top.....	.50
3093	Rope guide for ½-in. rope pulley.....	.50
3056	Rope guide for ⅞-in. rope pulley.....	.80
2486	Rheostat terminal with insulation.....	.75
2106	Swing joint, for Music Stands, etc., 2 parts with wing nut.....	1.50
3072	Stop collar, clearance for 1½-in. pipe, set screws ⅝ x 5/16 ins.—18.....	.50
3071	Stop collar, clearance for 1-in. pipe, set screws ⅝ x 5/16 ins.—18.....	.50
3070	Stop collar, clearance for ¾-in. pipe, set screws ⅝ x 5/16 ins.—18.....	.50
3073	Stop collar, clearance for ½-in. pipe, set screws ⅝ x 5/16 ins.—18.....	.50
3040	Set screws ½ x ¼ ins.—20 thread.....	.05
3041	Set screws ¾ x 5/16 ins.—18 thread.....	.05
3042	Set screws ⅝ x 5/16 ins.—18 thread.....	.05
3043	Set screws 2½ x ½ ins.—13 thread.....	.15
3044	Set screws 1½ x ⅝ ins.—16 thread.....	.10
3045	Set screws 2 x ½ ins.—13 thread.....	.12
1009	Stop collar for ½-in. pipe, with thumb screw 1 x ⅝ ins.—16 thread.....	.35
119	Swing joint with stud, ½ in.—13 thread for 1000-watt and Arc spots.....	1.25
716	Swing joint with stud, ½ in.—13 thread for Focusing Baby Spot.....	1.00
1008	Swing joint ½-in. pipe thread for top of stand.....	.85
1107	Swing joint with stud, ½ in.—13 thread, for Flood Light.....	1.25
1025	Swing joint ½-in. pipe thread, for Baby Hercules stand.....	.75
1296	Swing joint with stud, ½ in.—13 thread, for Baby Hercules Section.....	.85
3007	Tee, clearance for 1-in. pipe, stud with ½-in. pipe thread, set screws ⅝ x 5/16 ins.—18.....	.80
3006	Tee, clearance for ¾-in. pipe, stud with ½-in. pipe thread, set screws ⅝ x 5/16 ins.—18.....	.80
3005	Tee, clearance for ½-in. pipe, stud with ½-in. pipe thread, set screws ⅝ x 5/16 ins.—18.....	.80
3008	Tee, clearance for 1½-in. pipe, stud with ½-in. pipe thread, set screws ⅝ x 5/16 ins.—18.....	.80
1010	Thumb screw, 1 x ⅜ in.—16 thread.....	.10
3000	Tie pin, stud with ½-in. pipe thread.....	.75
933	Thumb screw, ½ x ¼—20 thread, Baby Hercules.....	.08
935	Thumb screw, 1 x ¼ thread, for Baby Hercules.....	.10
934	Thumb screw, shoulder, 1 x ¼—20 thread, for Baby Hercules.....	.10
3009	U fitting clearance for 1½-in. pipe, base tapped for ½-in. pipe, with set screws ¾ x 5/16—18.....	1.00
715	Wing nut ½ in.—13 thread.....	.15



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2233	63	2473	96	2806	102
2234	63	2476	96	2807	102
2238	63	2477	96	2820	102
2239	63	2478	96	2821	102
2240	63	2486	96	2822	102
2244	64	2500	91	2823	102
2245	64	2501	91	2824	102
2246	64	2502	91	2825	102
2250	64	2503	91	2826	102
2251	64	2508	91	2827	102
2252	64	2509	91	2828	102
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